

FIG. 1

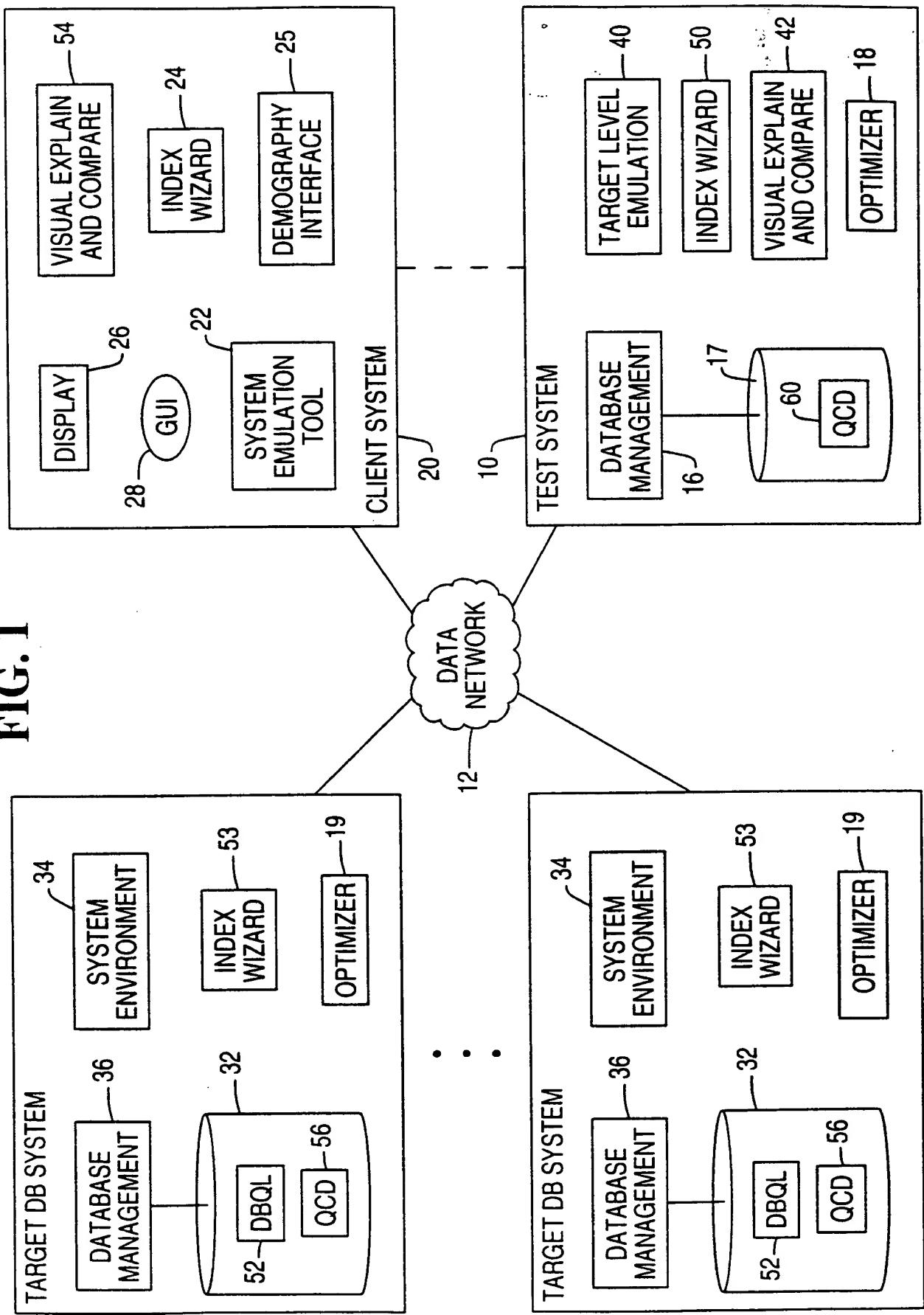


FIG. 2

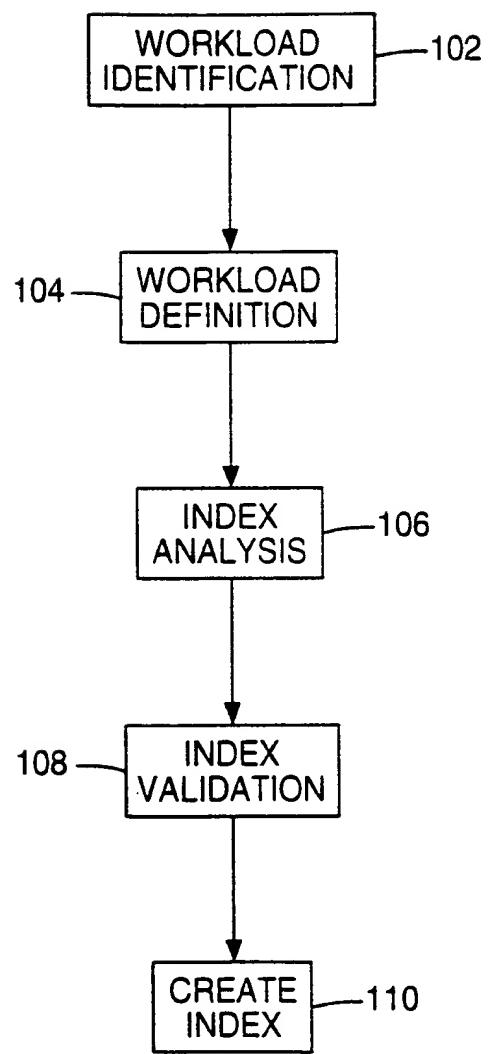


FIG. 3

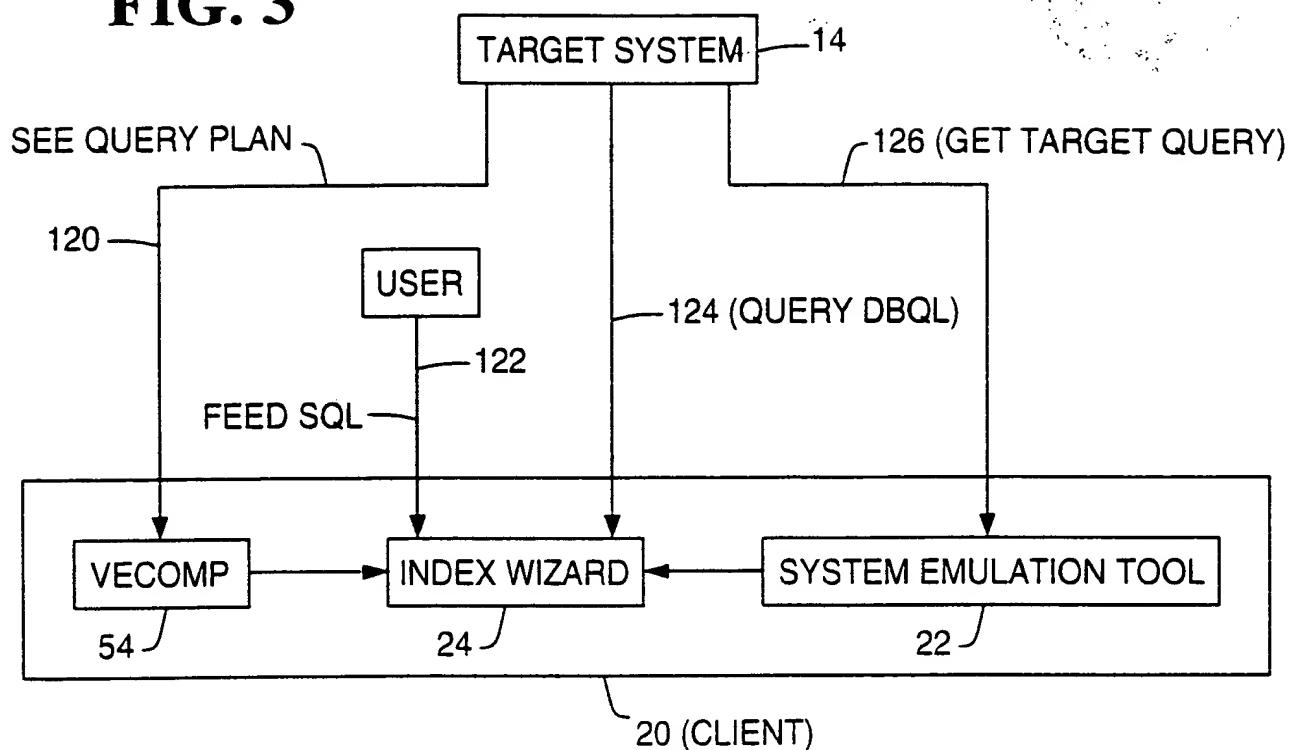


FIG. 4

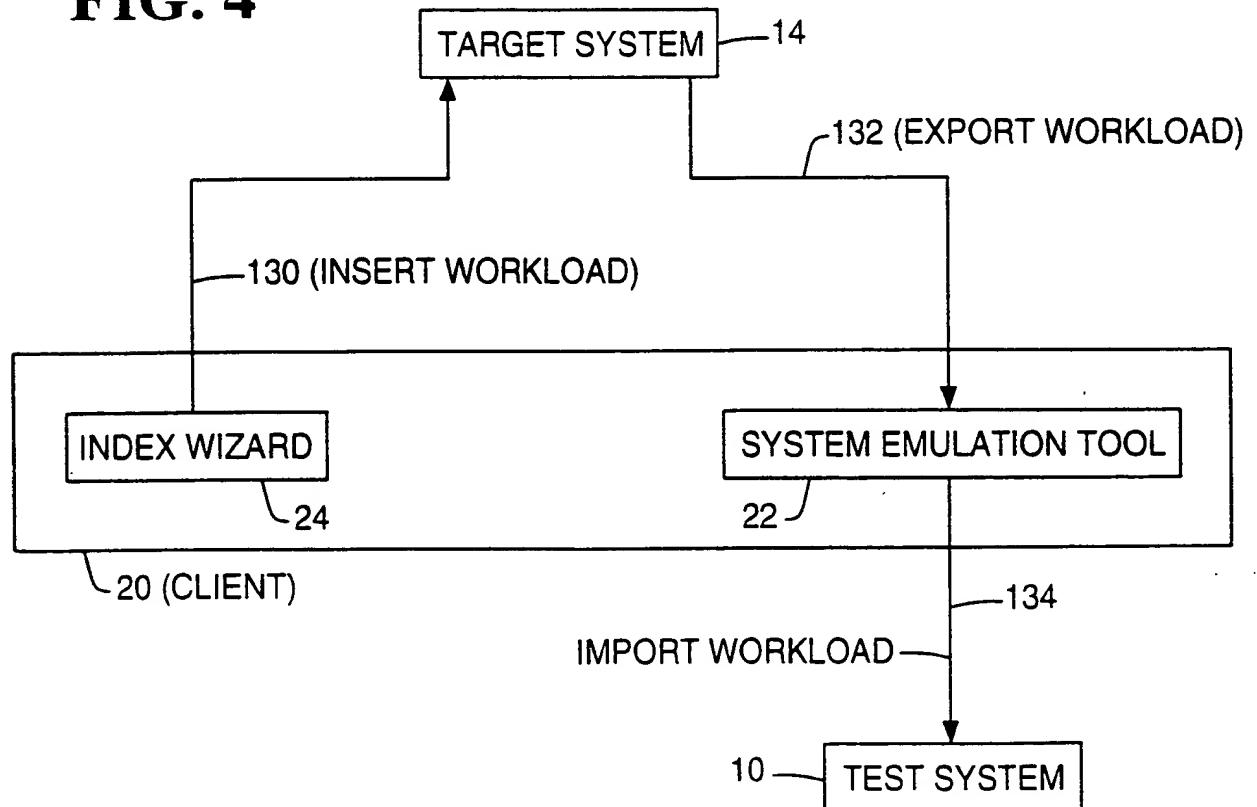


FIG. 5

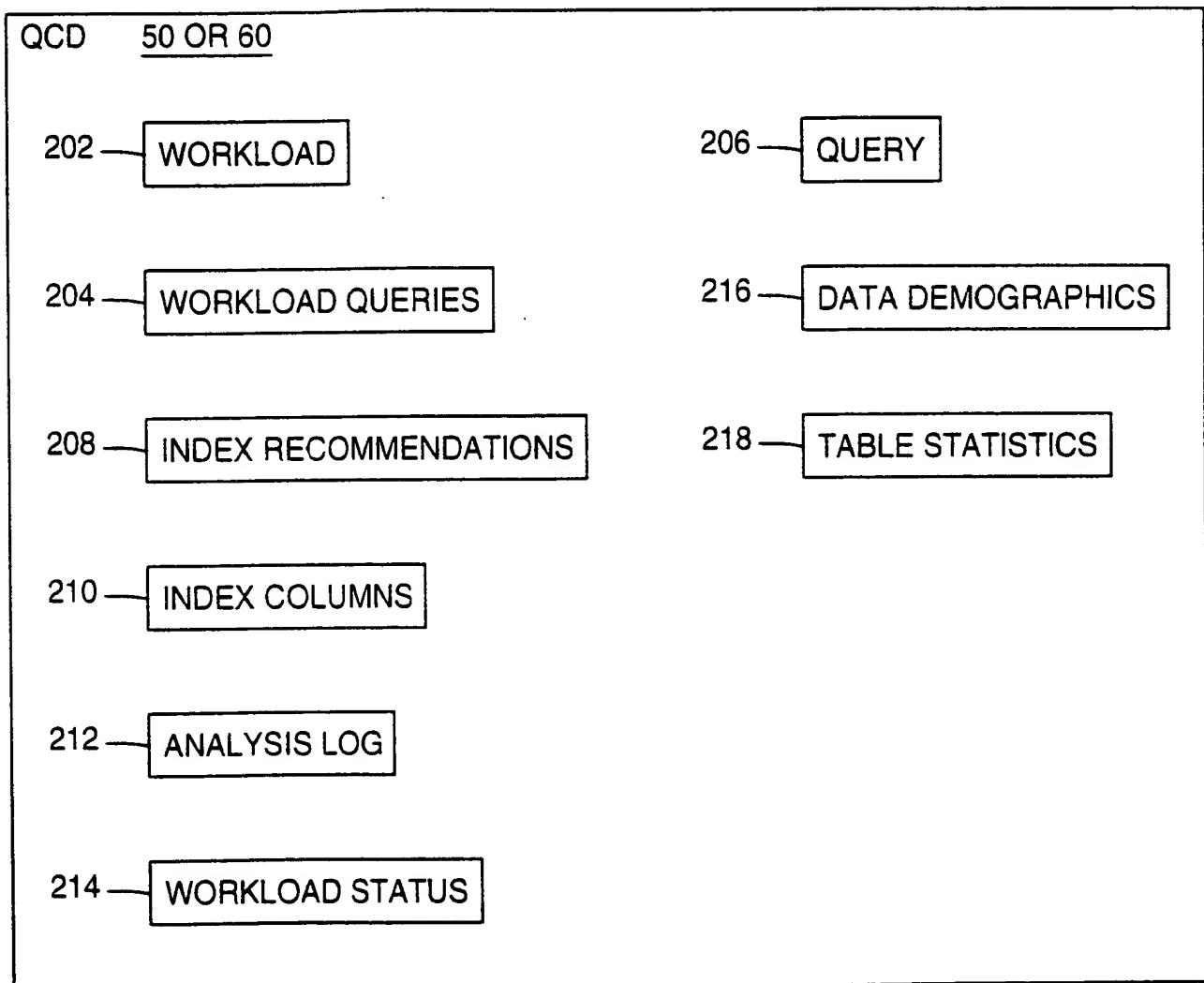


FIG. 6

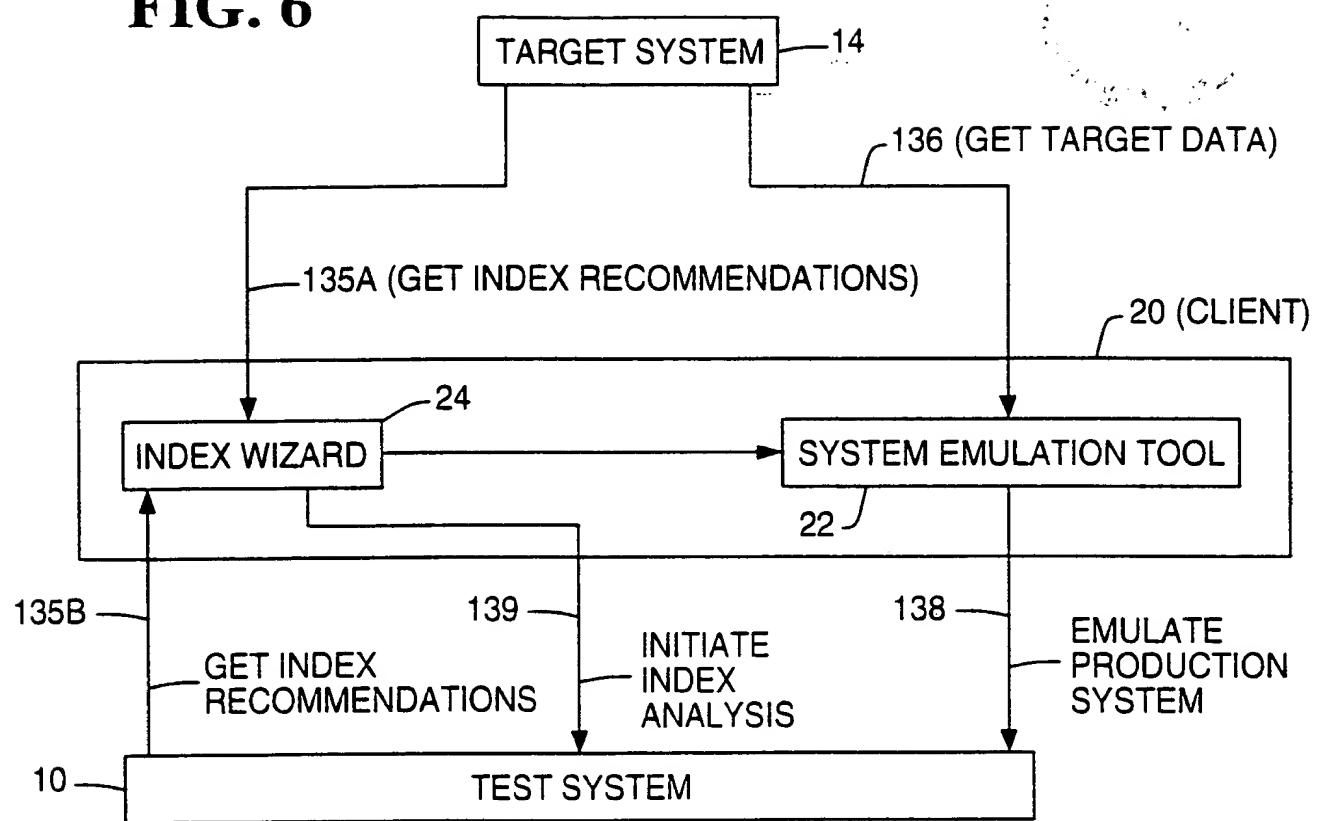


FIG. 8

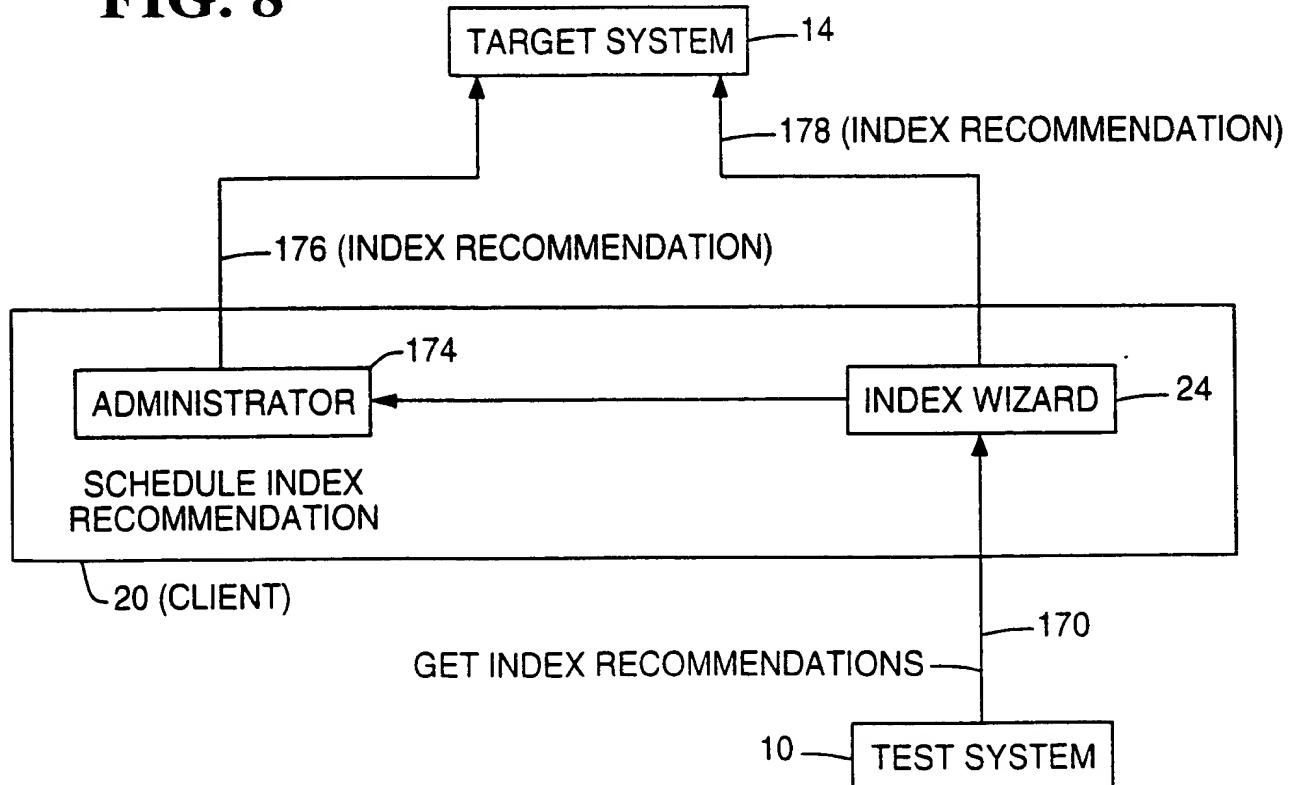


FIG. 7

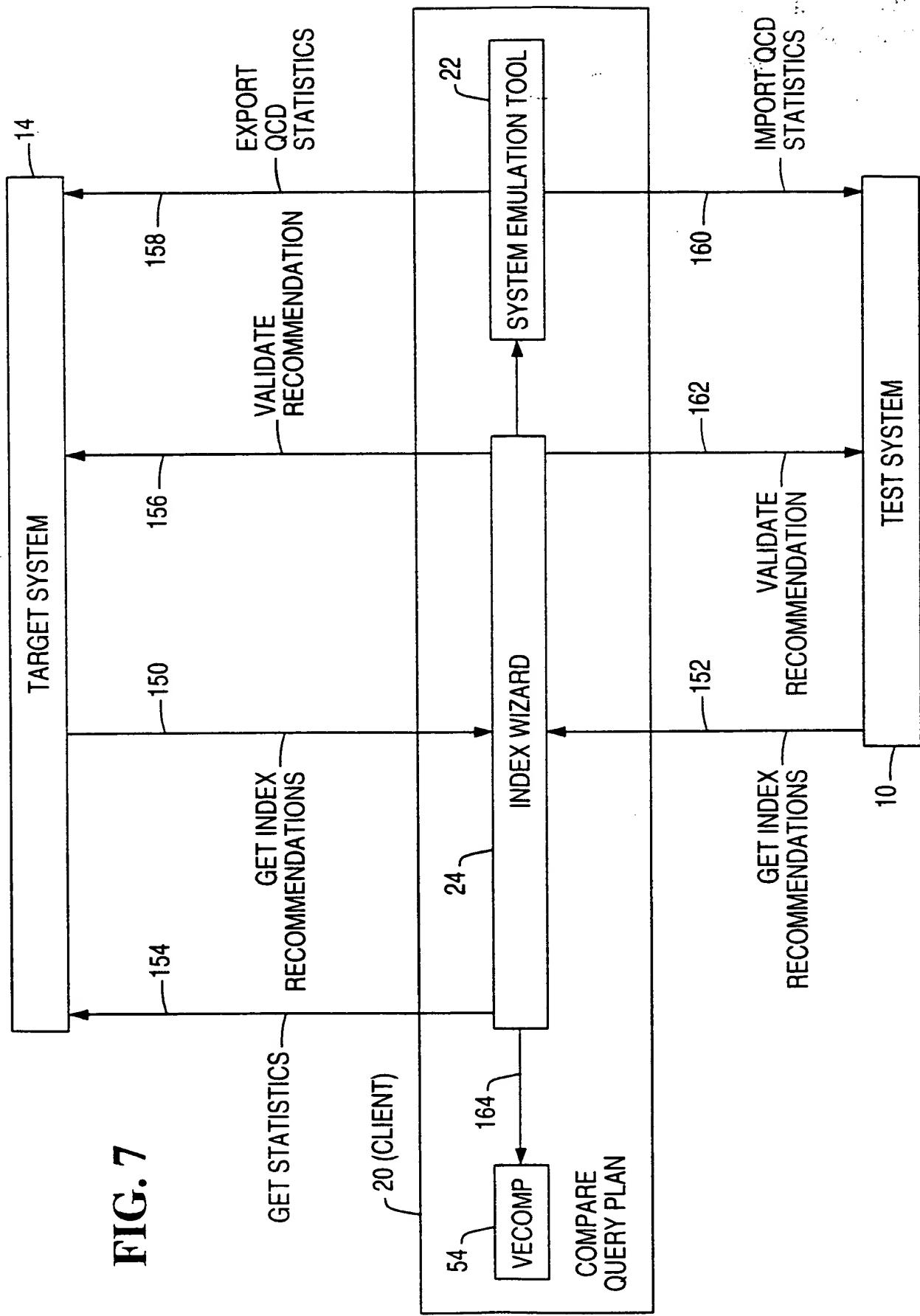


FIG. 9

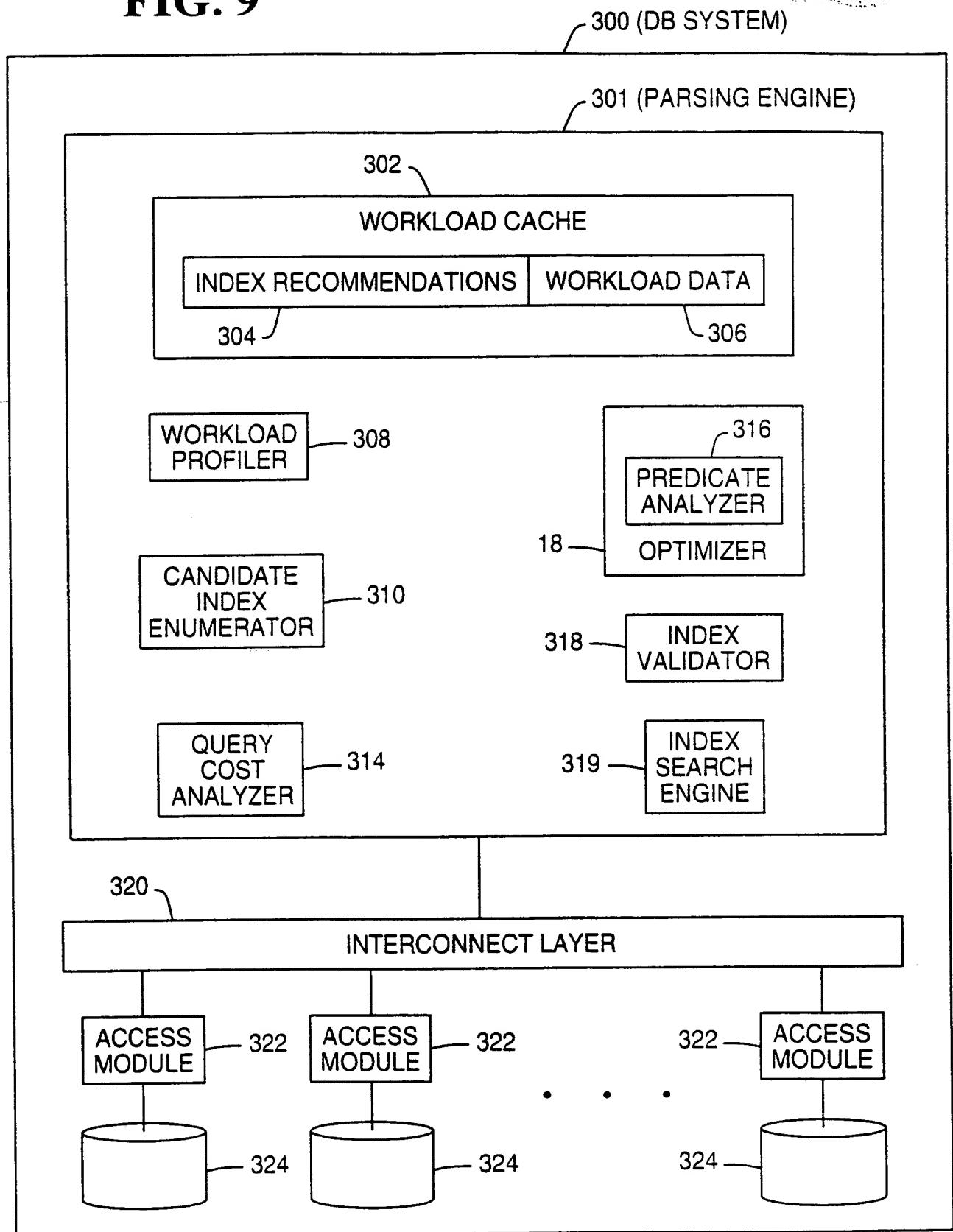


FIG. 10

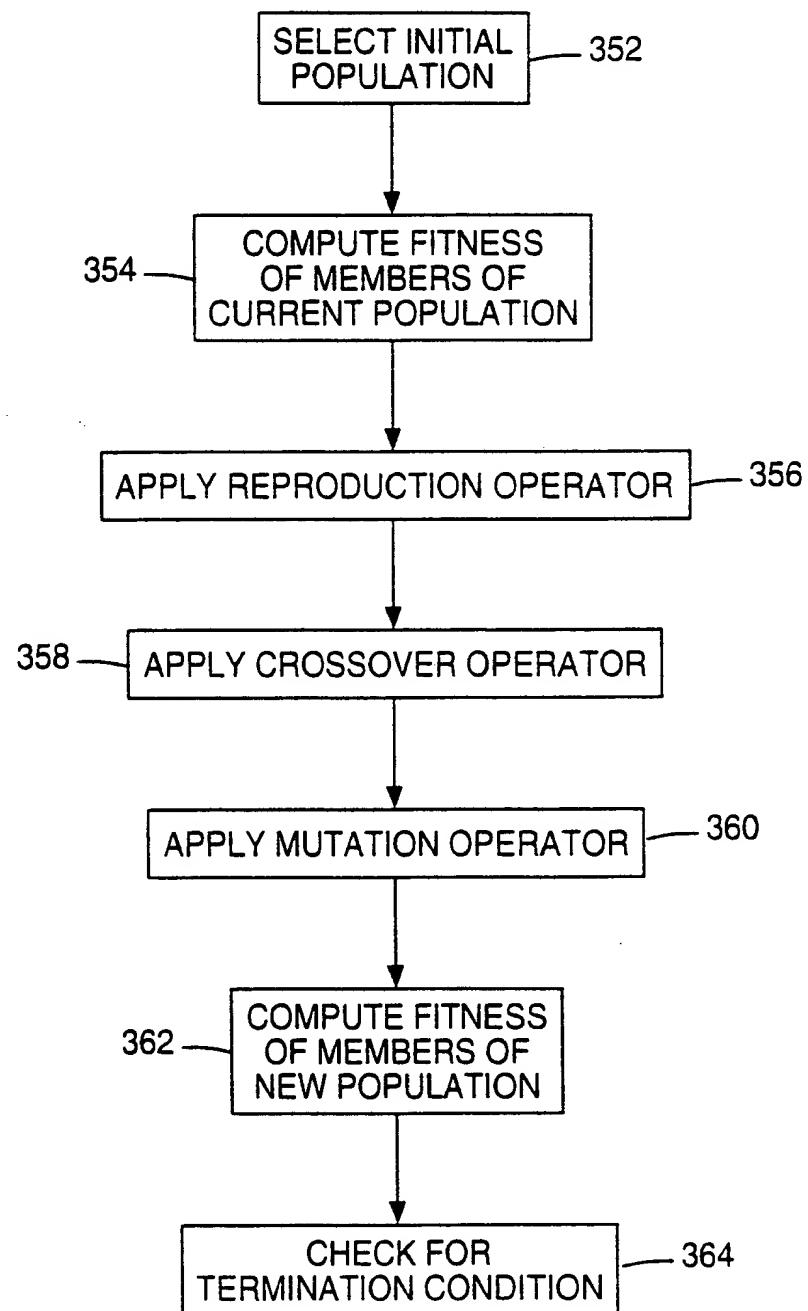


FIG. 11

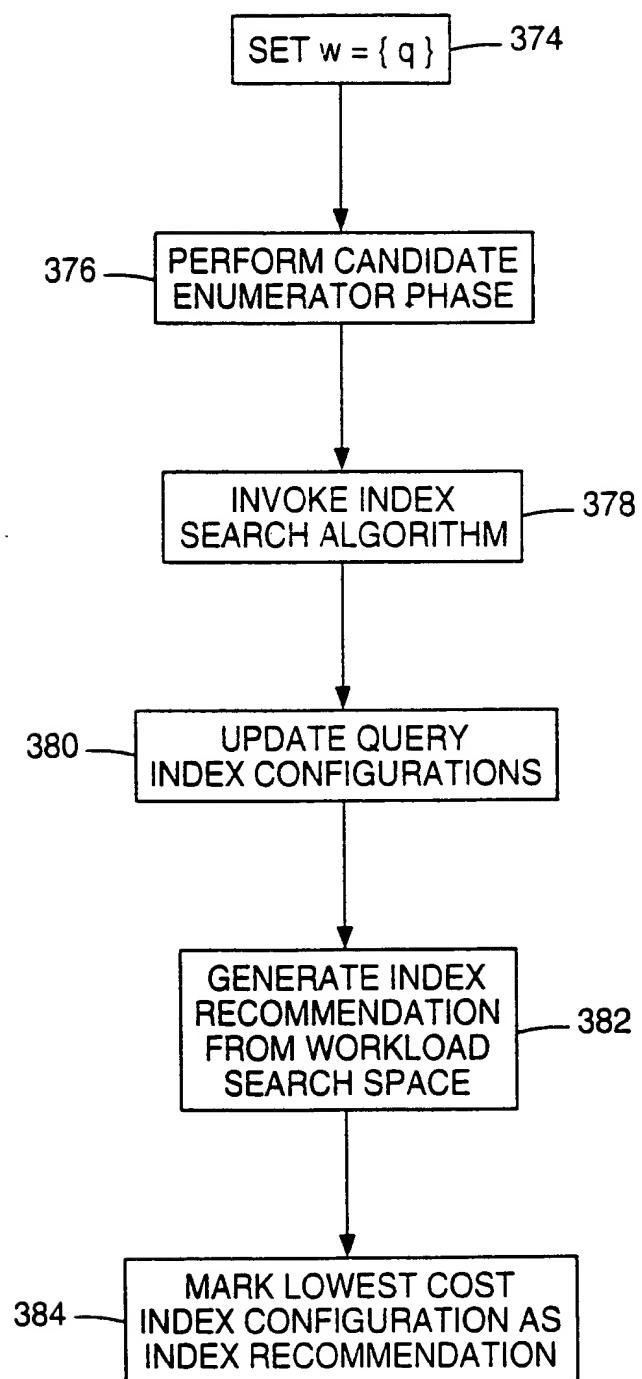


FIG. 12

400

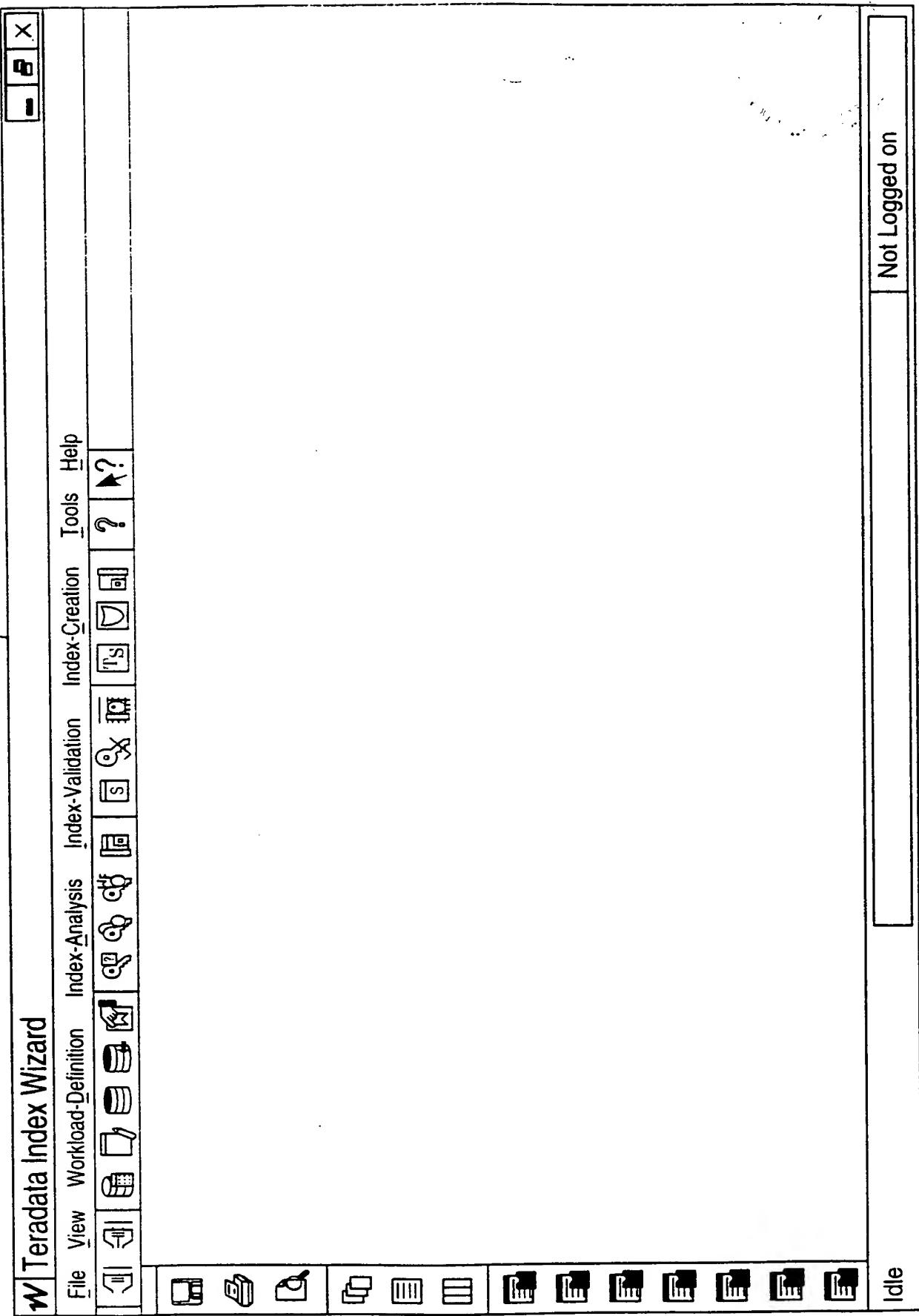


FIG. 13

400

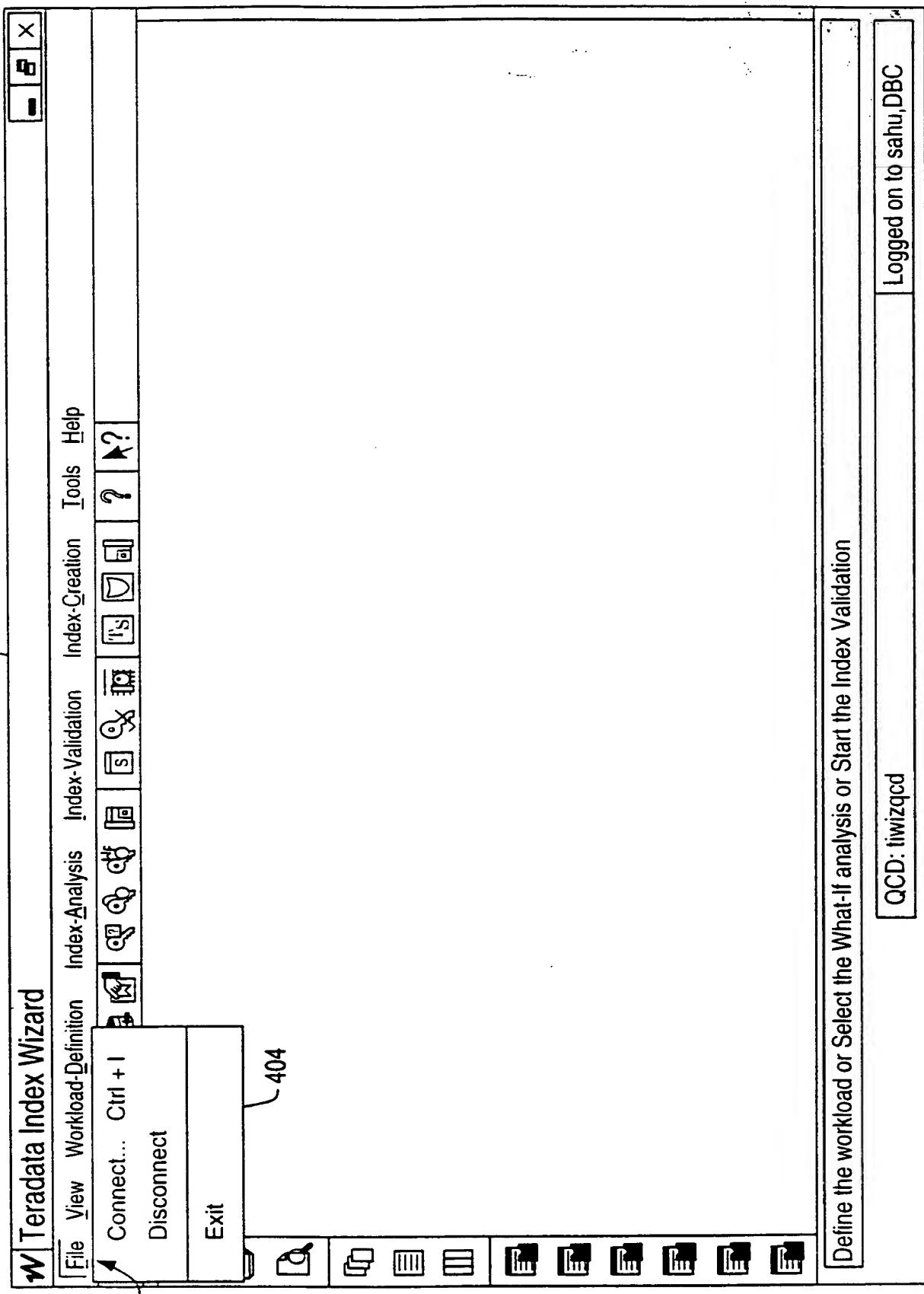


FIG. 14

400

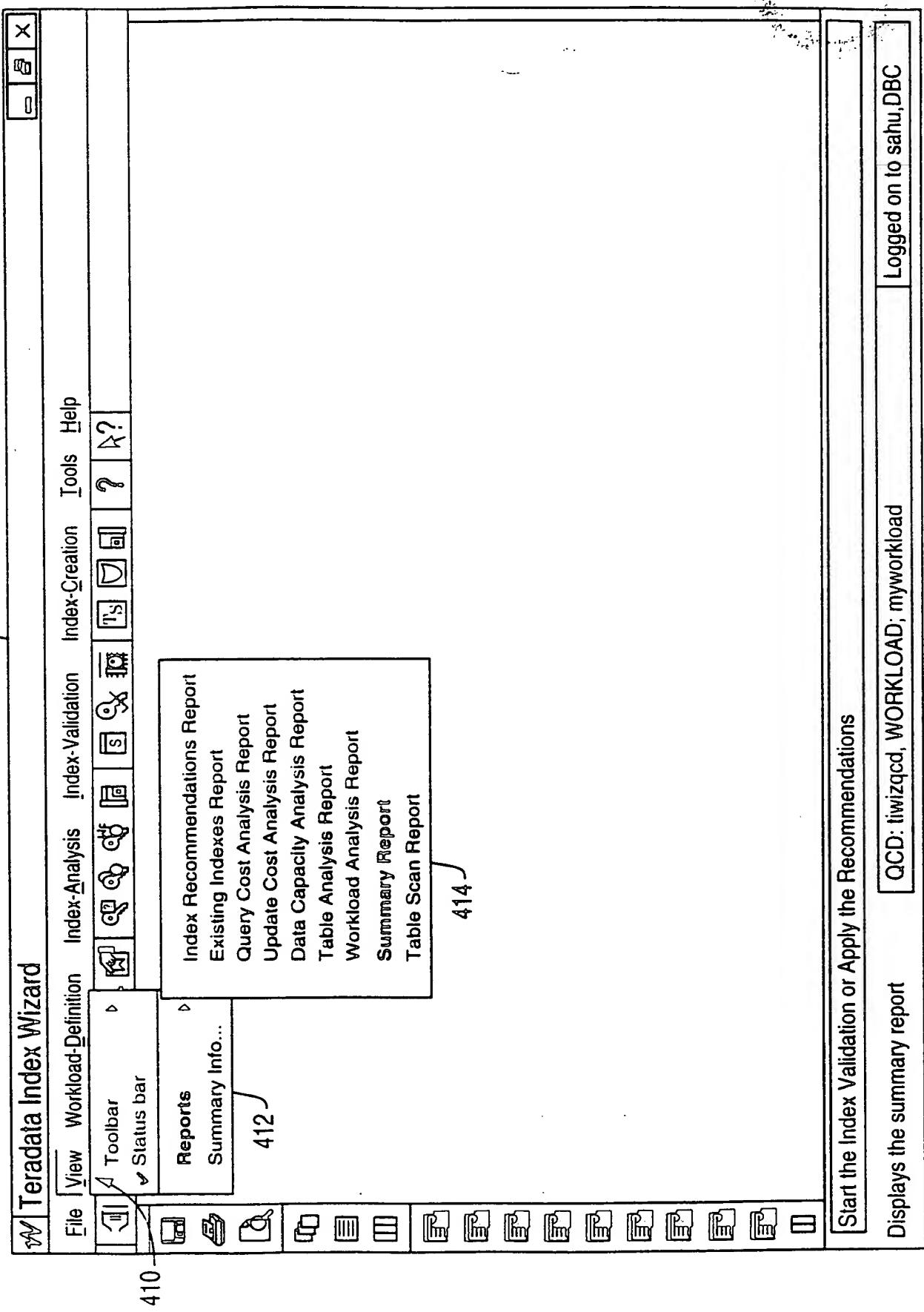


FIG. 15

400

420

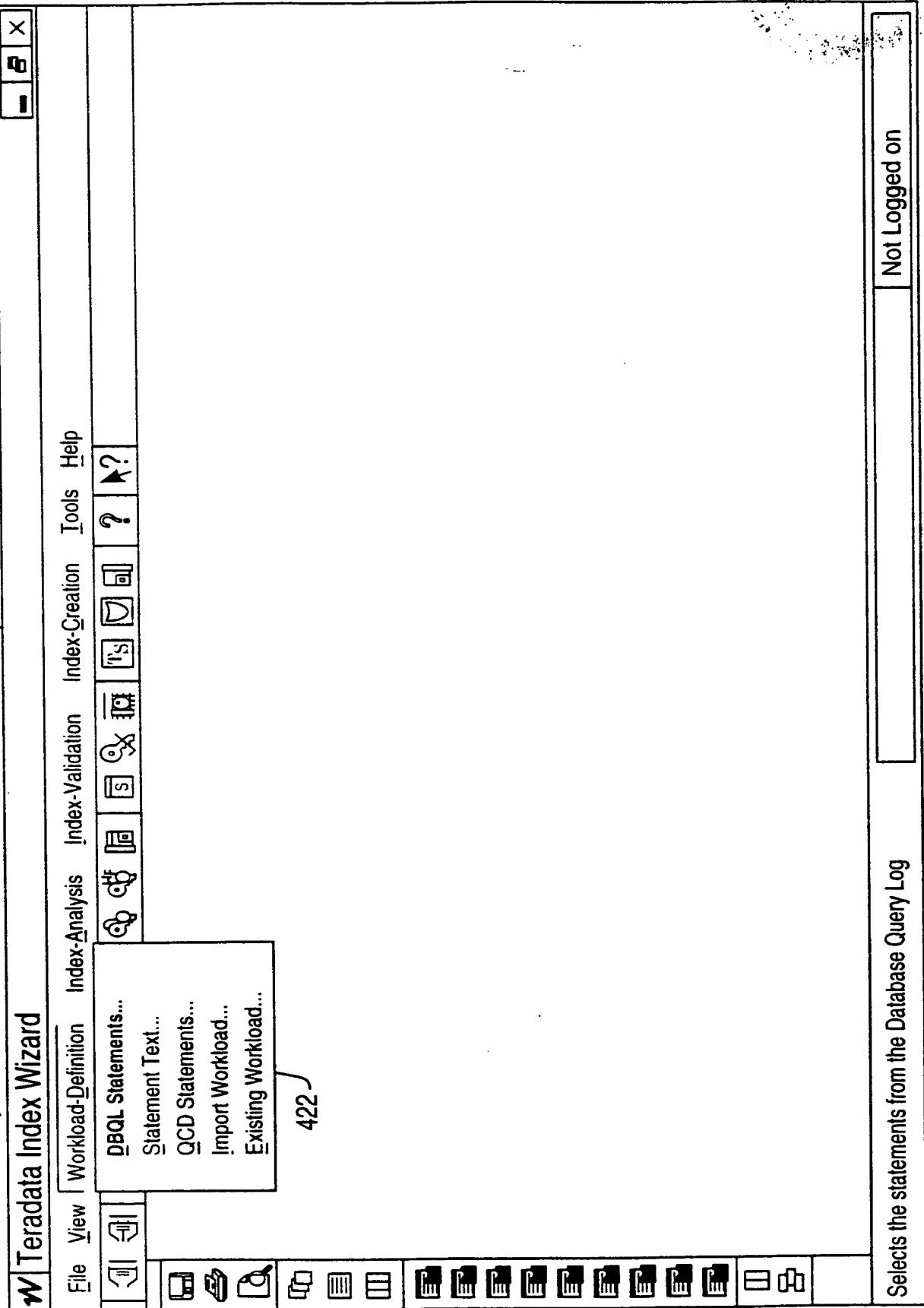


FIG. 16

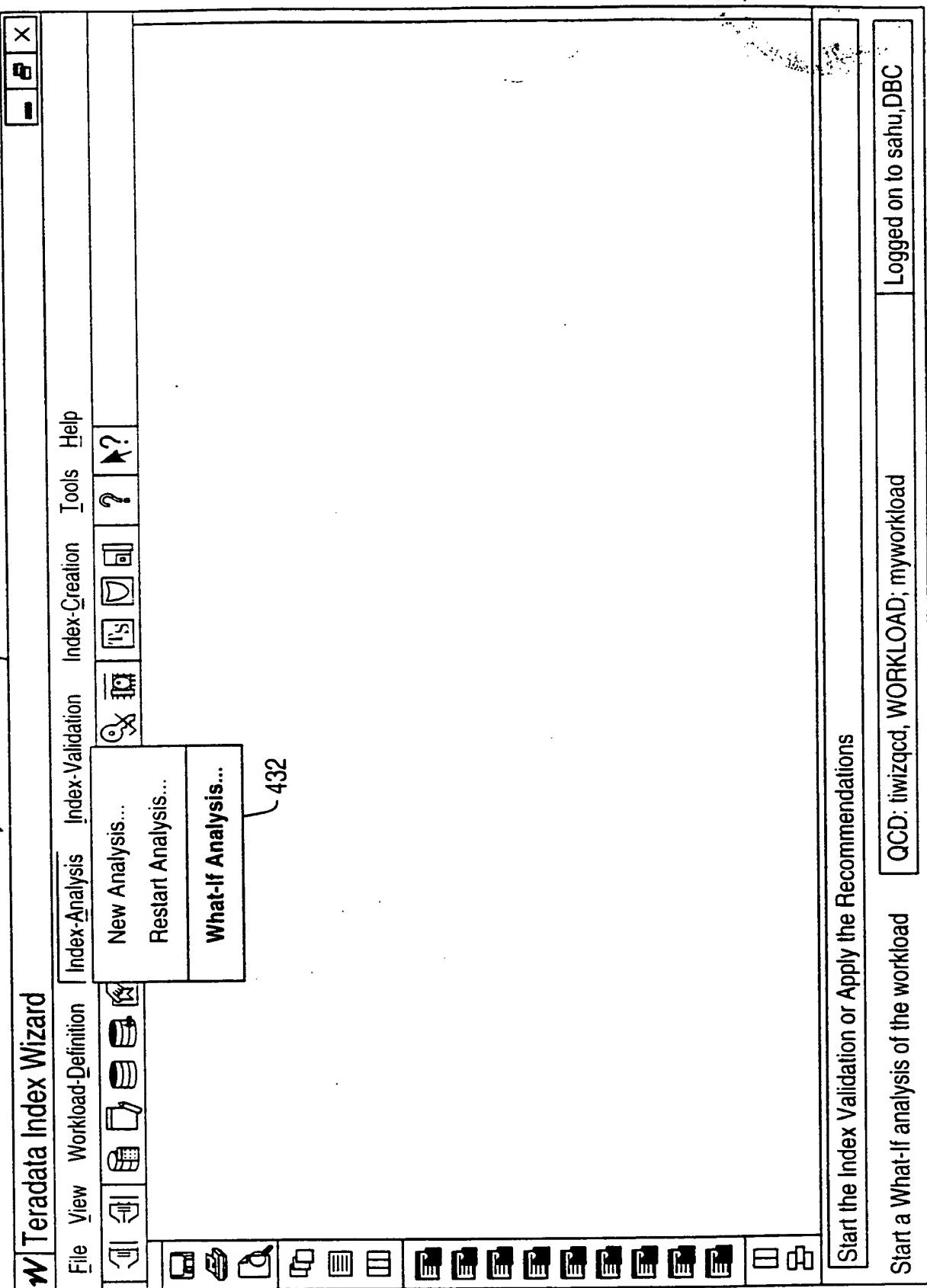


FIG. 17

↙ 440 ↘ 400

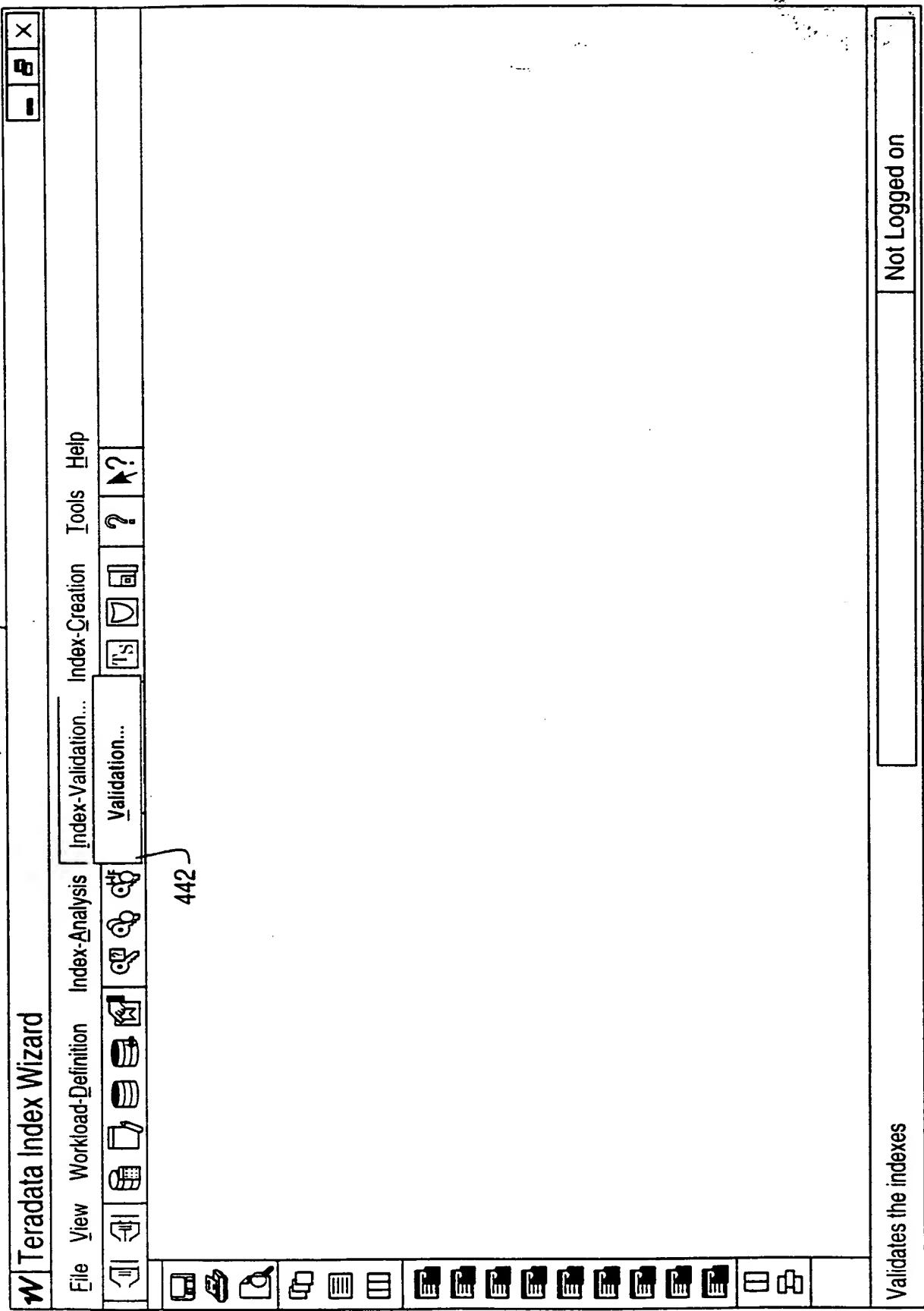


FIG. 18

450

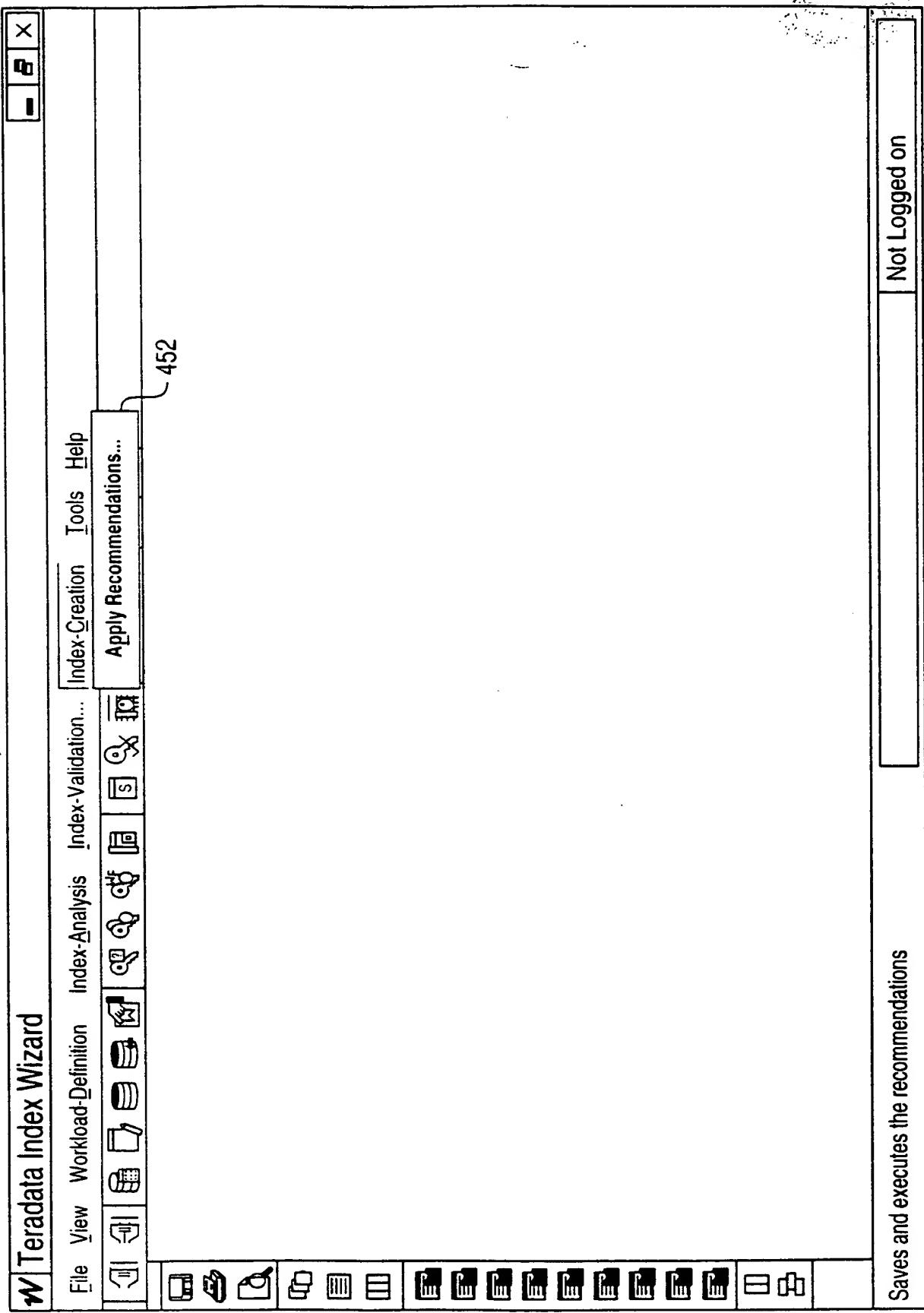


FIG. 19

460

400

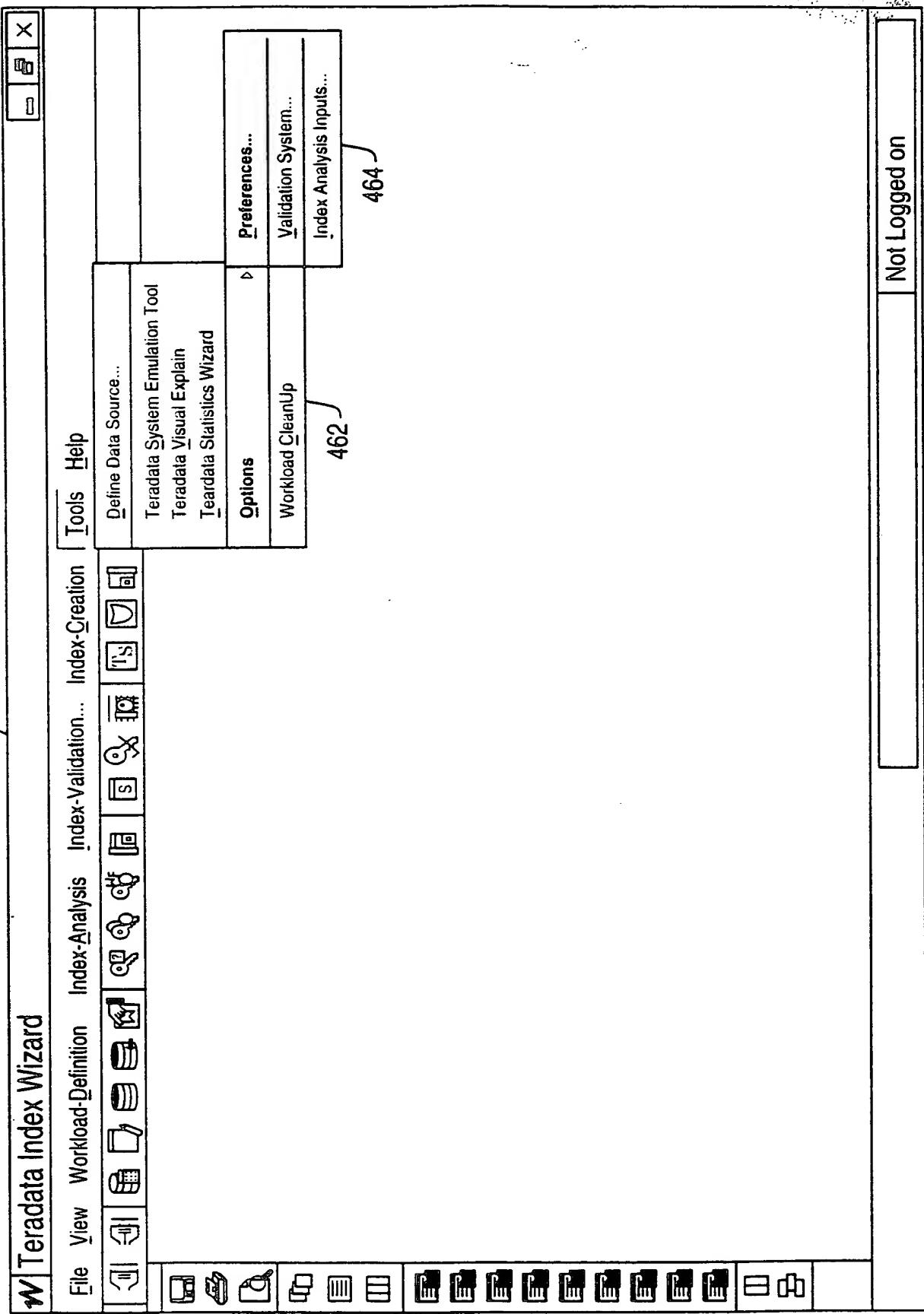


FIG. 20

	ICON	DESCRIPTION
800		TO LOGON TO THE TERADATA RDBMS SERVER
801		TO LOG OFF FROM THE TERADATA RDBMS SERVER
802		TO SELECT THE STATEMENTS FROM THE DBQL
803		TO ENTER THE SQL STATEMENTS OR SELECT THEM FROM MORE THAN ONE FILE
804		TO SELECT THE SQL STATEMENTS FROM THE QCD
805		TO IMPORT A WORKLOAD FROM A PRODUCTION SYSTEM
806		TO SELECT AN EXISTING WORKLOAD
807		TO SET/RESET THE INDEX ANALYSIS PARAMETERS
808		TO START INDEX ANALYSIS
809		TO PERFORM "WHAT-IF" ANALYSIS
810		TO RESTART INDEX ANALYSIS FROM A CHECKPOINT
811		TO DISPLAY SUMMARY INFORMATION
812		TO VALIDATE THE INDEXES
813		TO SCHEDULE THE CREATION OF INDEXES
814		TO VIEW THE HELP CONTENTS
815		TO GUIDE THE USER HOW TO USE HELP

FIG. 21

500

Define Workload

DBQL Search Criteria

User Name: Account Name:
Start Time: End Time:
Row Count: I/O Count: Frequency:

Statement Text:
 503

DBQL Statements

502

Selected	Frequency	Statement Text
<input type="text"/>		

Workload Name:

OK Cancel

FIG. 22

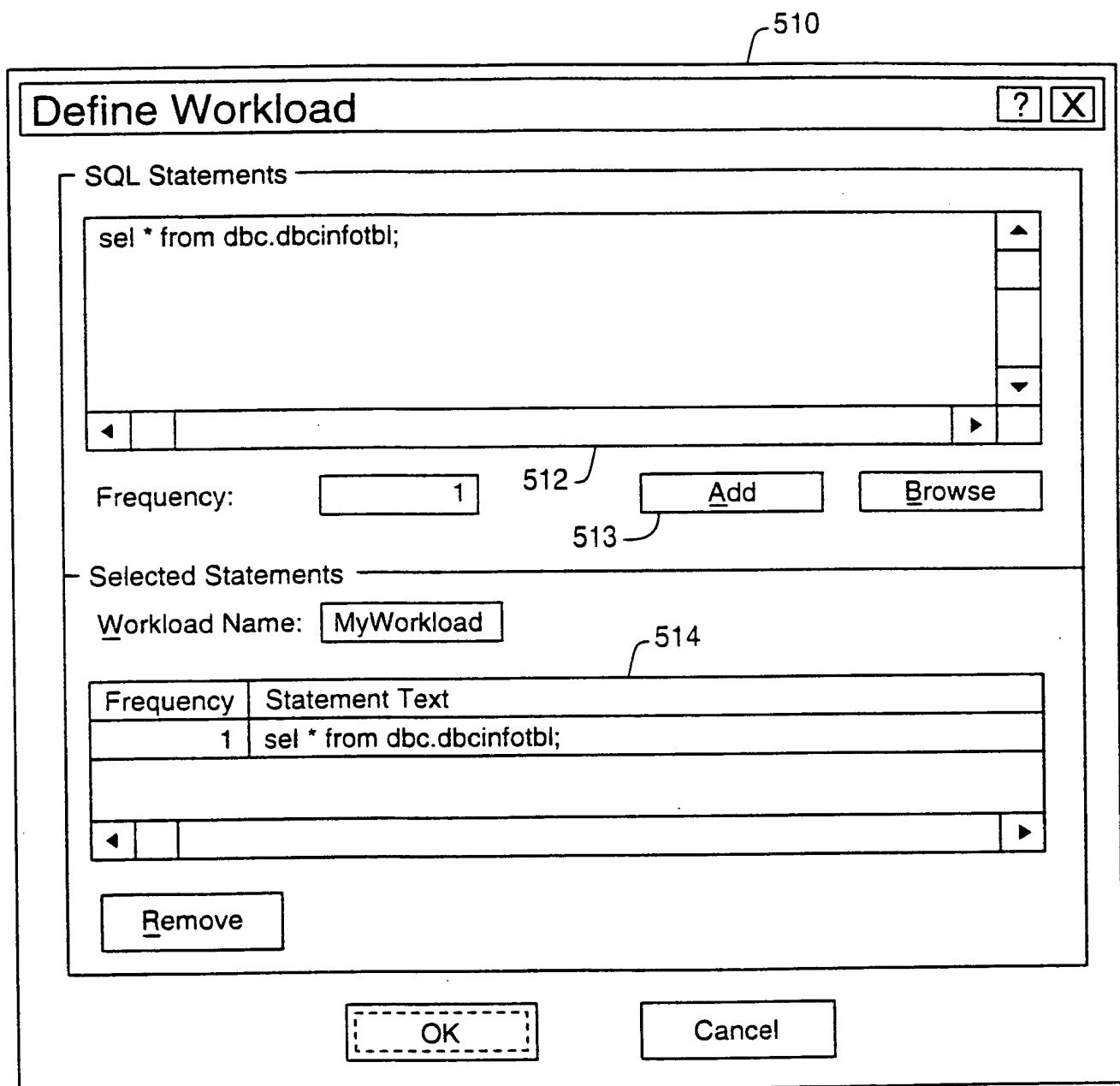


FIG. 23

520

522

524

522

Define Workload

QCD Statements

QCD Name:	Query Id:	Query Tag:	
TIWizQCD			Browse QCD

Selec	Query	Frequ	Statement Text
<input checked="" type="checkbox"/>	19	1	Insert explain into tiwizqcd sel * from query,relation;
<input checked="" type="checkbox"/>	17	1	Insert explain into tiwizqcd sel * from query;;;
<input type="checkbox"/>	15	1	sel * from query,relation where query.queryid =
<input checked="" type="checkbox"/>	13	1	sel * from query,relation ,workload;;;
<input type="checkbox"/>	32	1	sel * from query,relation where relation.relation
<input checked="" type="checkbox"/>	11	1	sel * from query,relation where query.queryid =
<input checked="" type="checkbox"/>	9	1	sel * from query,relation ,workload where quer
<input type="checkbox"/>	30	1	sel * from query;;;
<input type="checkbox"/>	28	1	Insert explain into TIWizQCD sel * from relation

Workload Name:

FIG. 24

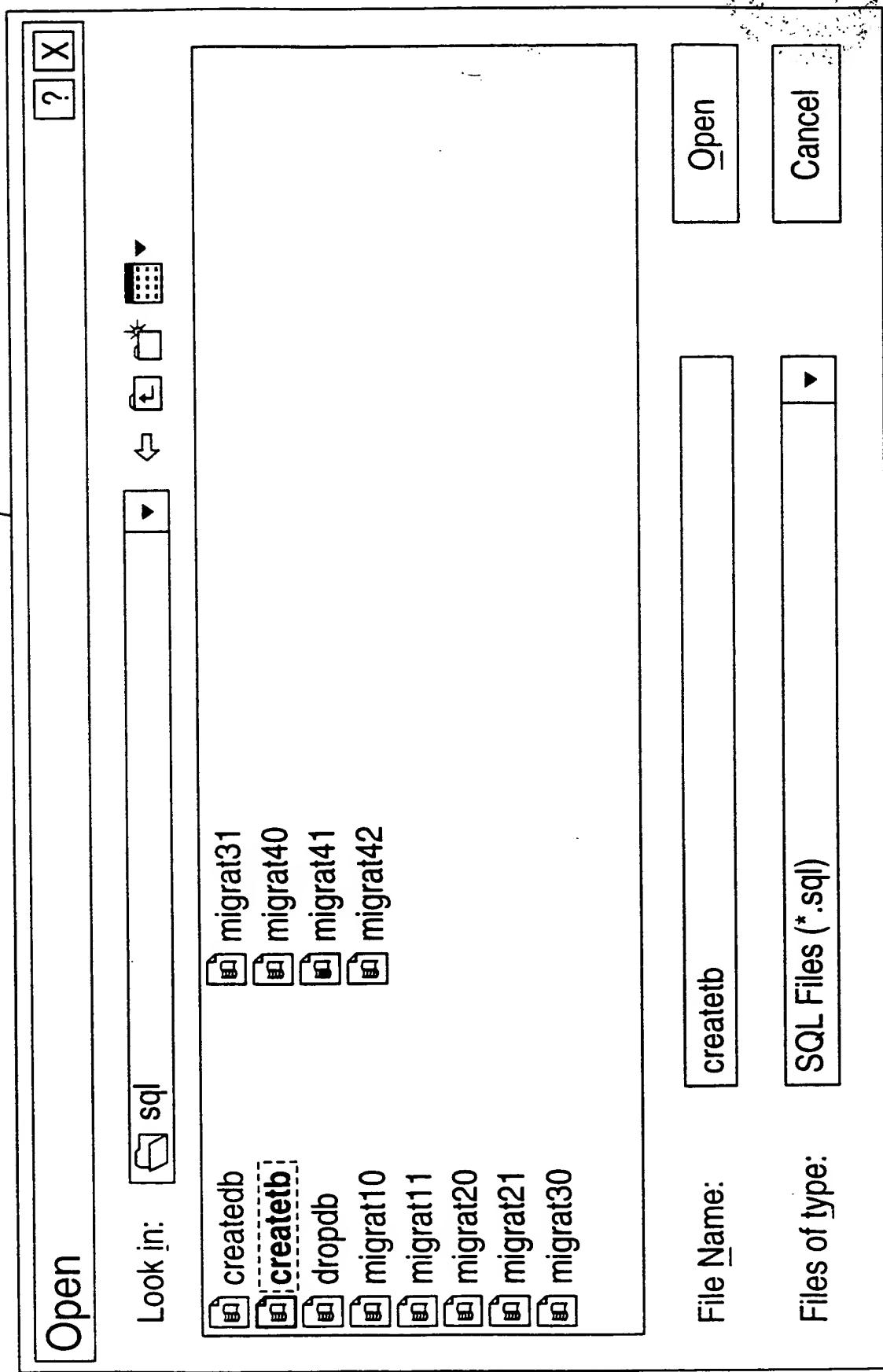


FIG. 25

540

Define Workload

542

Select SQL Statements

Selected	Frequency	Statement Text
<input checked="" type="checkbox"/>	1	SELECT DISTINCT t_2.t_2_c_2- t_
<input type="checkbox"/>	1	SELECT NULLIF (t_4.t_4_c_3
<input checked="" type="checkbox"/>	1	DELETE FROM t_4 WHERE NO
<input checked="" type="checkbox"/>	1	DELETE t_1 WHERE NULLIF (t_1
<input type="checkbox"/>	1	INSERT INTO t_2 (t_2.t_2_c_1 , t_2.
<input checked="" type="checkbox"/>	1	UPDATE t_1 FROM t_5, t_2, t_3 SET

◀ ▶

Workload Name: MyWorkload Select All Deselect All

OK Cancel

FIG. 26

550

Existing Workload

Workload Statements

QCD Name: 552

Workload Name:

State	Frequ	Statement Text	▲
1	1	sel * from query;;	▼
2	1	sel * from relation;;	▼

Workload Status

Recommend	Index Tag	Validate Sy	Validate Ti	Validate Q	Recom	▲
2	myindextag	deepika	7:43.670000	tiwizqcd	NONE	▼
1	MyIndexT ac	deepika	7:43.670000	tiwizqcd	NONE	▼
2	myindextag	deepika	7:43.670000	tiwizqcd	NONE	▼

Modify Options

Qcd Statements 554

Query Text

556

OK Cancel

FIG. 27

Existing Workload

Workload Statements

QCD Name: TIWizQCD

550A

Workload Name: MyWorkload

552A

Select	State	Frequ	Statement Text
<input checked="" type="checkbox"/>	1	1	sel * from query;;
<input type="checkbox"/>	2	1	sel * from relation;;

Workload Status

Recommend	Index Tag	Validate Sy	Validate Ti	Validate Q	Recom
2	myindextag	deepika	7:43.670000	tiwizqcd	NONE
1	MyIndexT ac	deepika	7:43.670000	tiwizqcd	NONE
2	myindextag	deepika	7:43.670000	tiwizqcd	NONE

558

559

Modify Options

Qcd Statements

Query Text

New Workload Name:

Update

OK

Cancel

FIG. 28

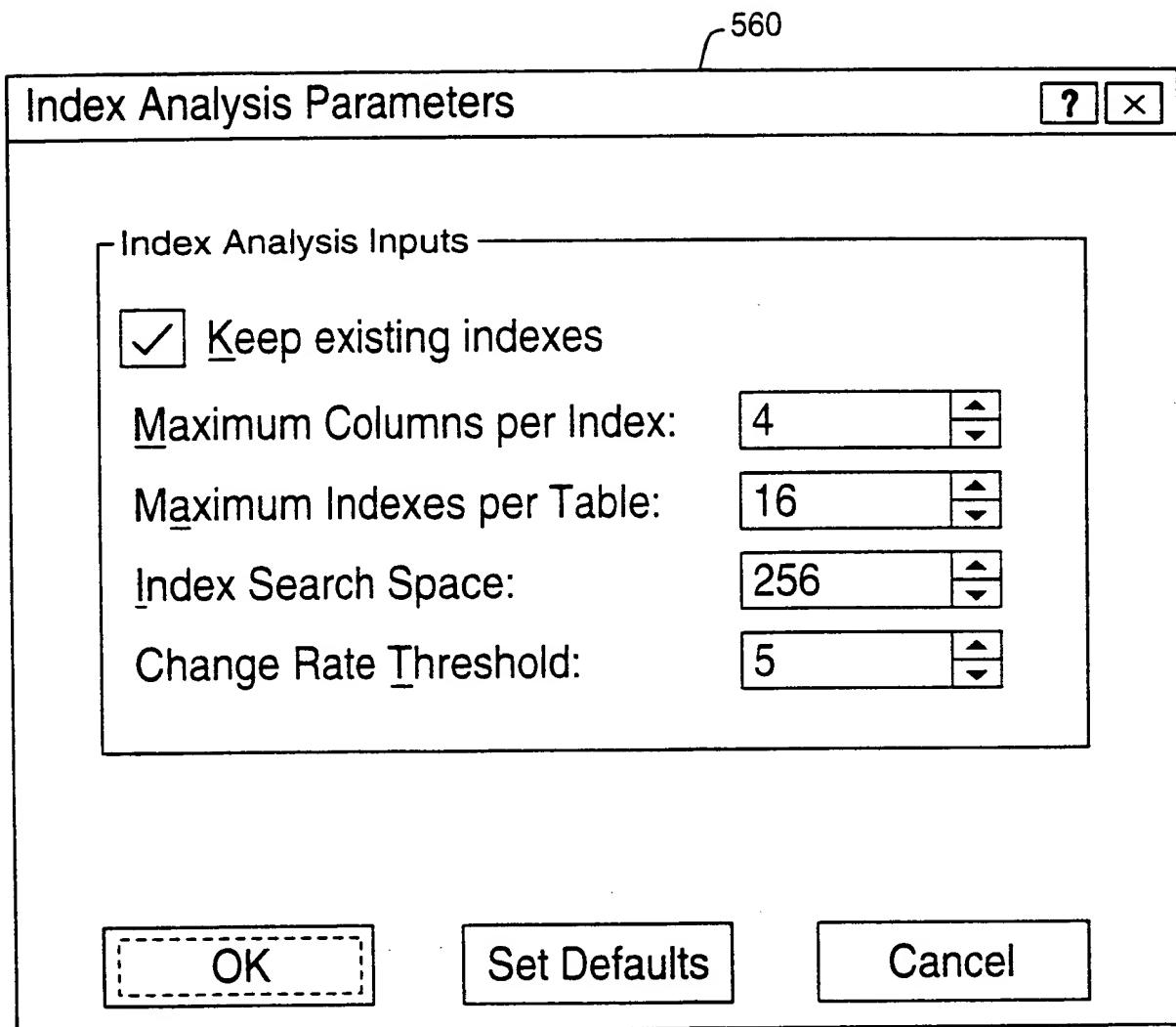


FIG. 29

570

Index Analysis

Workload Statements

572

Statement Id	Frequency	Statement Text
3	1	sel * from query,relation where relation.relationshipid
1	1	sel * from query;;
2	1	sel * from relation;;

Select Tables

574

Selected	Database Name	Table Name	Access
<input checked="" type="checkbox"/>	tiwizqcd	QUERY	3
<input checked="" type="checkbox"/>	tiwizqcd	RELATION	2

Select All Deselect All

Restart Parameters

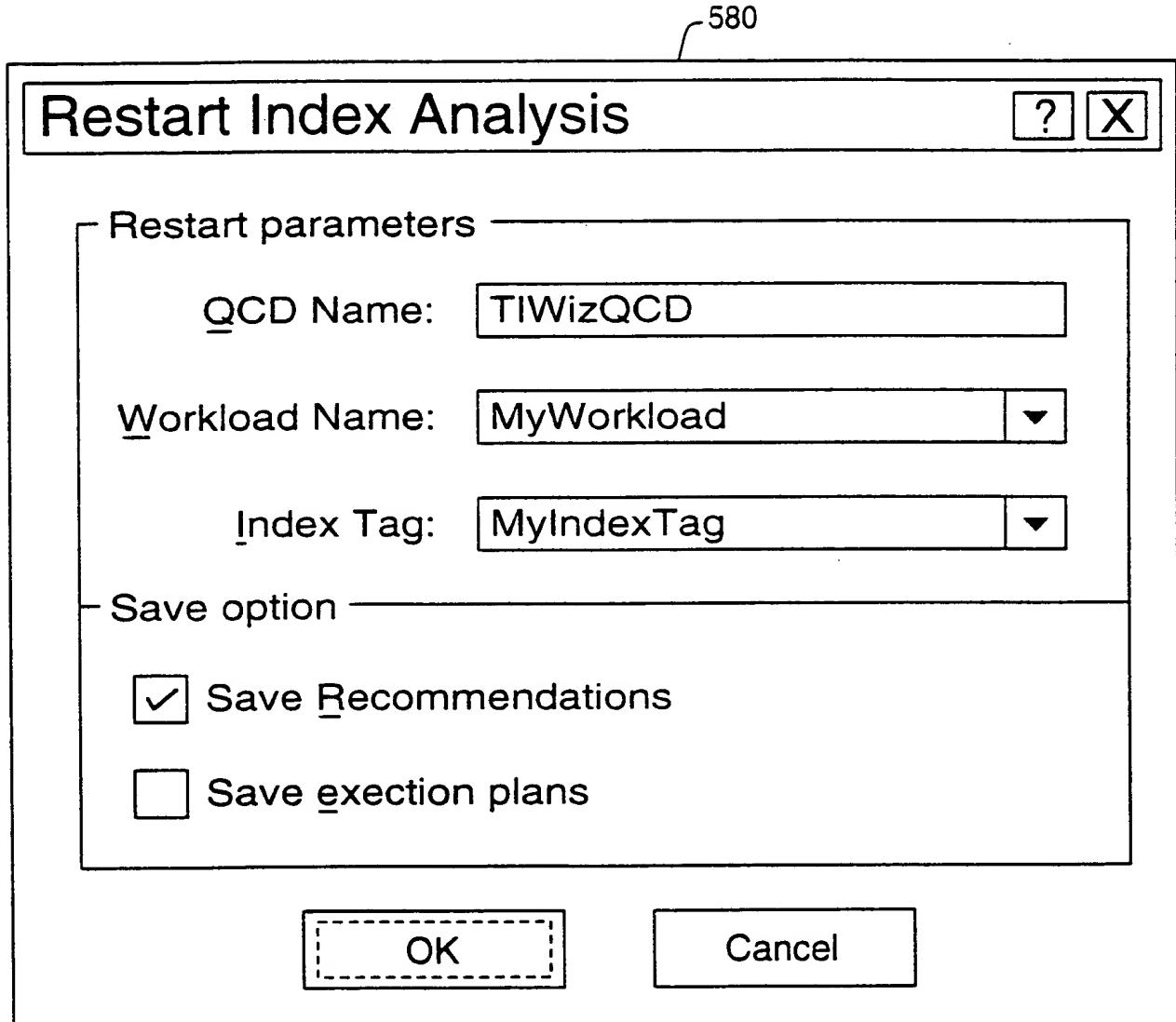
Index Tag: Checkpoint Frequency:

Save Options

Save Recommendations in Files Save Execution Plans in Files

OK Cancel

FIG. 30



What-If Analysis

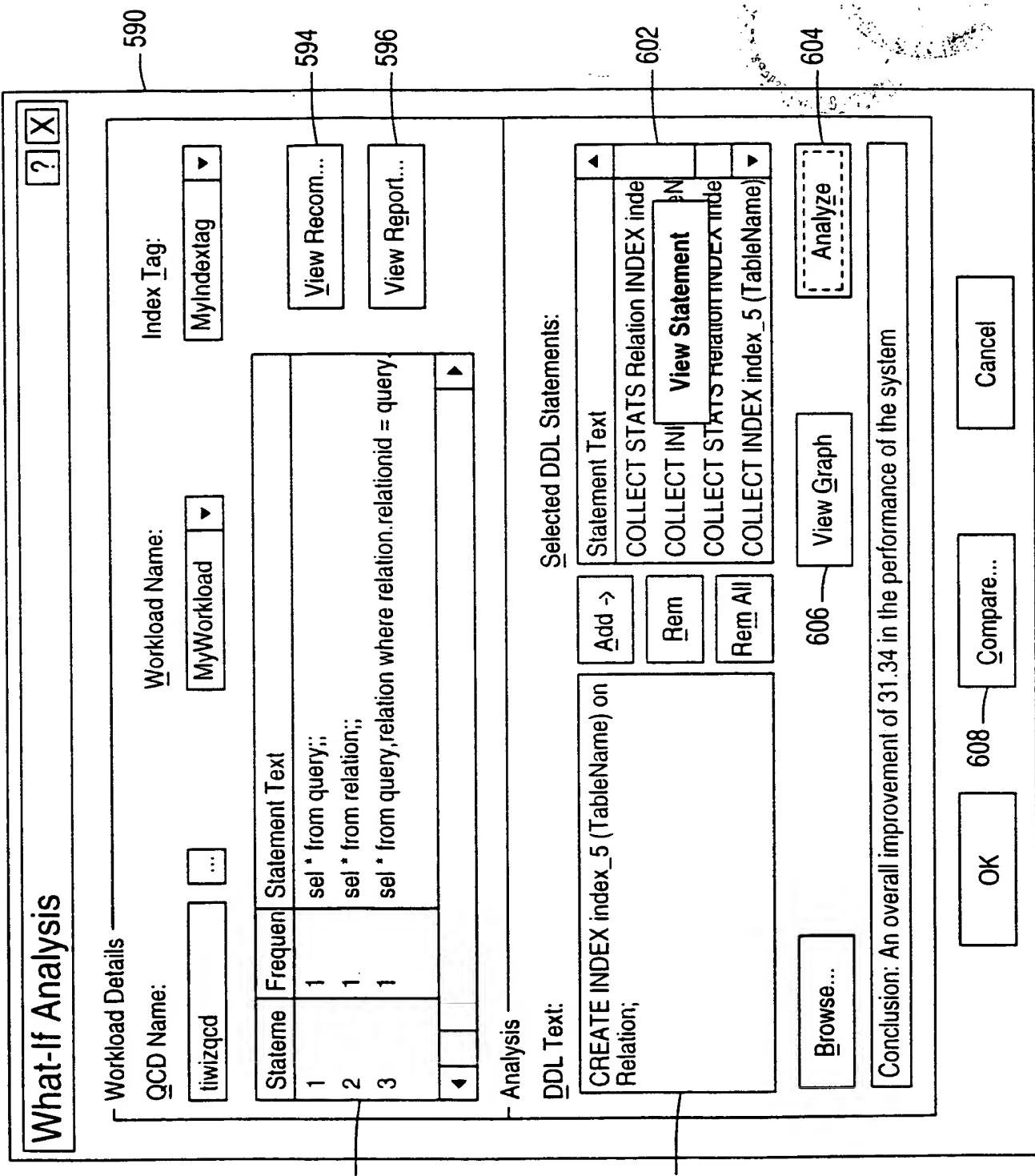


FIG. 31

FIG. 32

620

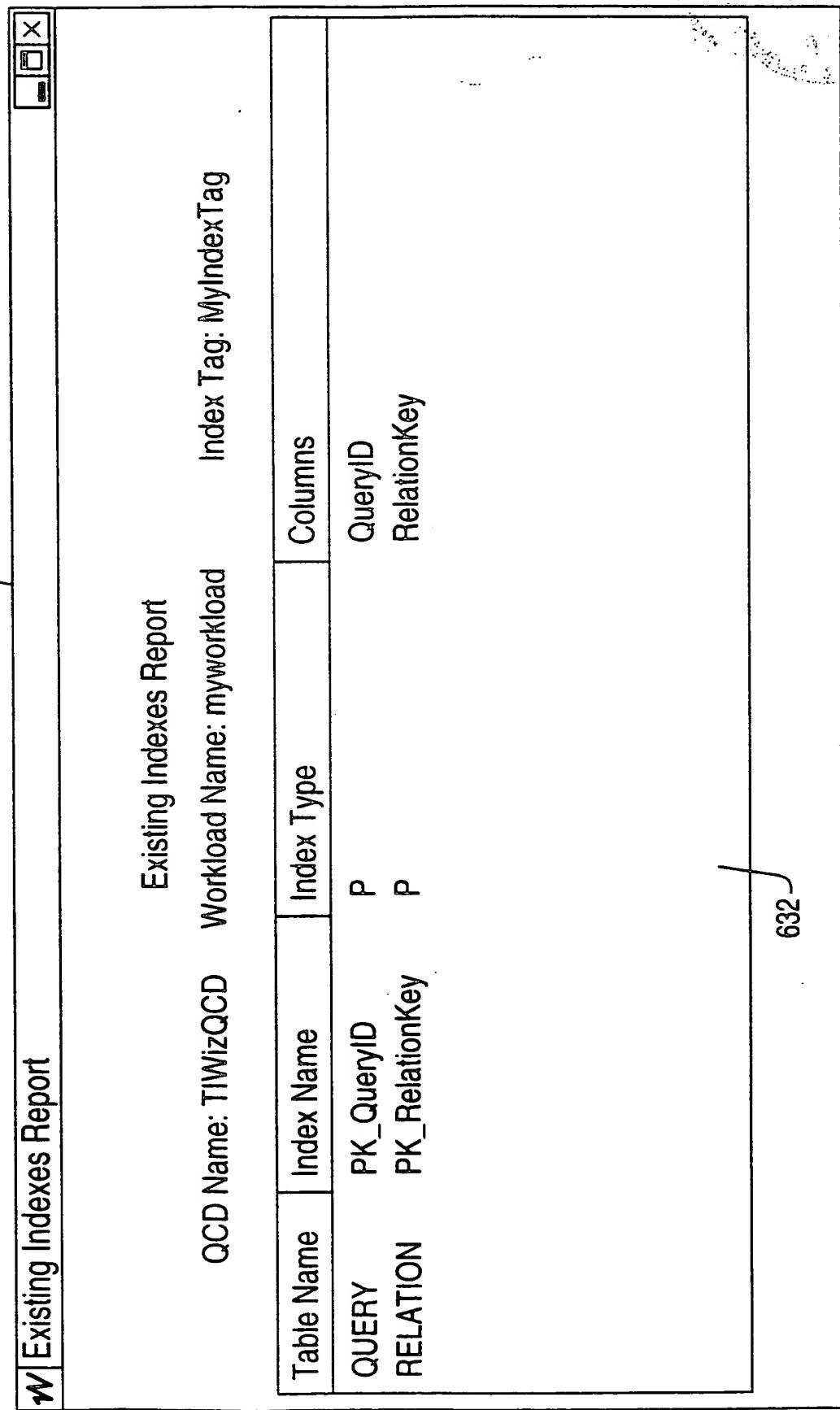
W Index Recommendation Report

QCD Name: tiwizqcd Workload Name: myworkload Index Tag: myindextag

Table Name	Index Tag	Index T...	Size(KB)	Time Esti...	Index DDL	Stats DDL
QUERY	MyIndextag	USI	10.00	59.00	CREATE INDEX...	COLLECT STATS
RELATION	MyIndextag	USI	10.00	59.00	CREATE INDEX...	COLLECT STATS
RELATION	MyIndextag	USI	10.00	59.00	CREATE INDEX...	COLLECT STATS

622

FIG. 33



Existing Indexes Report

QCD Name: TIWizQCD Workload Name: myworkload Index Tag: MyIndexTag

Table Name	Index Name	Index Type	Columns
QUERY	PK_QueryID	P	QueryID
RELATION	PK_RelationKey	P	RelationKey

FIG. 34

640

Query Cost Analysis Report

QCD Name: TIWizQCD Workload Name: myworkload Index Tag: MyIndexTag

Query Type	Cost(with existing i...)	Cost(with recommended...)	Percentage Cha...	Query Text...
SELECT	100.00	50.00	100.00	sel * from query,relation w
SELECT	100.00	50.00	100.00	sel * from query;
SELECT	100.00	50.00	100.00	sel * from relation;;

642

FIG. 35

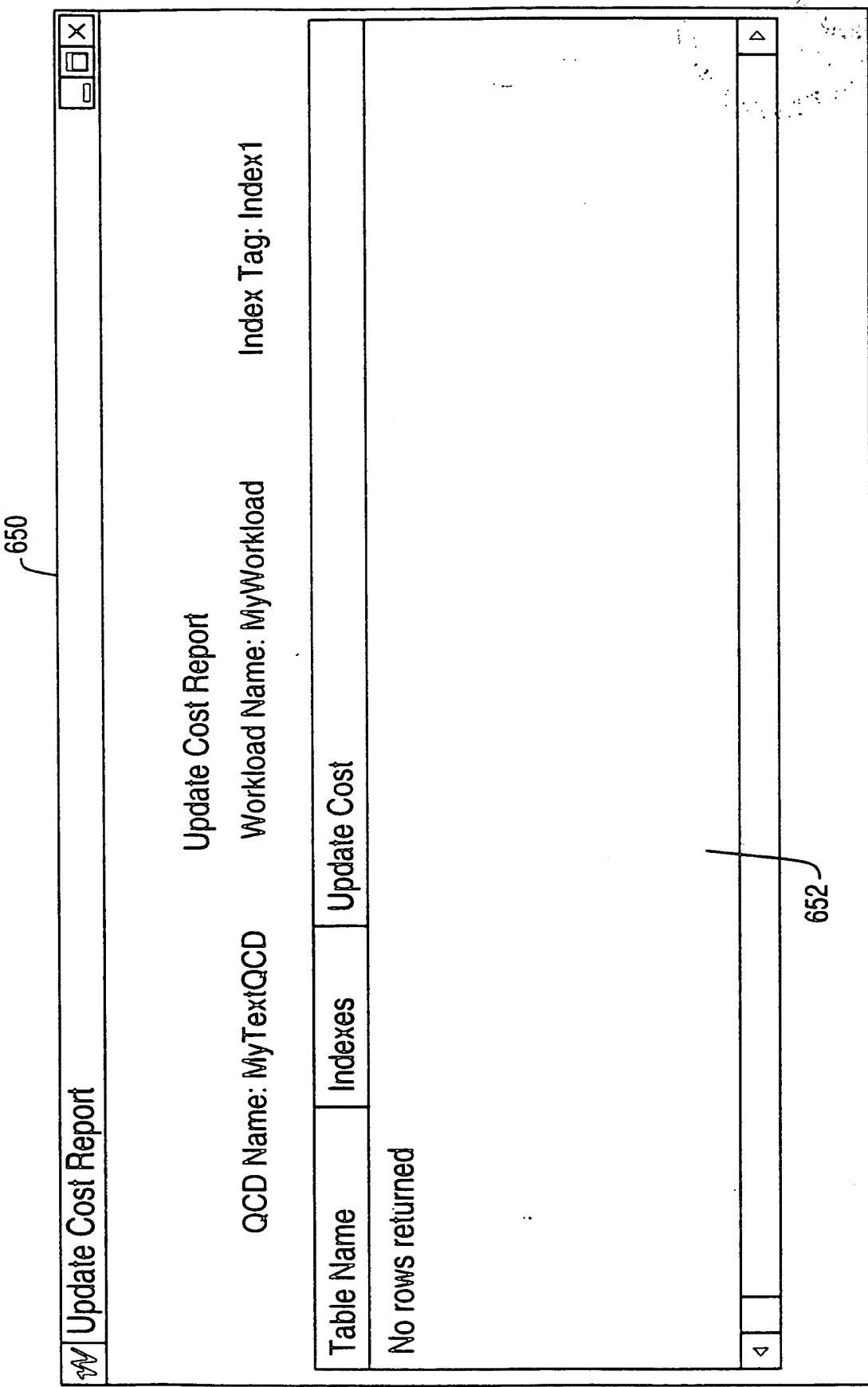


FIG. 36

Disk Space Analysis Report	
QCD Name: TiWizQCD	Workload Name: myworkload
Table Name	Index Name
QUERY	MyIndextag
RELATION	MyIndextag
RELATION	MyIndextag

FIG. 37

670

Table Usage Report

QCD Name: TiWizQCD Workload Name: myworkload Index Tag: MyIndexTag

Table Name	Access Count	Statement Text
QUERY	1	sel * from query,relation where relation.relationid = query.queryid and query.qu
RELATION	1	sel * from query,relation where relation.relationid = query.queryid and query.qu
QUERY	1	sel * from query;;
RELATION	1	sel * from relation;;
		672

FIG. 38

Workload Analysis Report						Index Tag: MyIndexTag
QCD Name: TiWiQCD			Workload Name: myworkload			
State...	Cost	Relative...	Table Na...	Columns	Columns involve...	Statement T
SELE...	10...	3.70	RELATION	RelationKey, Cardinality, Geogl...	?	sel * from q
SELE...	10...	3.70	QUERY	QueryText, QUERYNAME, Que	QueryID, QUER...	sel * from q
SELE...	10...	3.70	QUERY	UDB_KEY, QUERYNAME, Dat...	?	sel * from q
SELE...	10...	3.70	RELATION	SortInfo, VIEWNAME, UDB_KE...	?	sel * from q

FIG. 39

690

W Summary Report

QCD Name: TIWzQCD Workload Name: myworkload Index Tag: MyIndexTag

Summary Report

Table Name	Index Name	Index DDL	Stats	DDL
QUERY	MyIndextag	CREATE INDEX index_3 (QueryText) on Query;	COLLECT	STATS Query IND
RELATION	MyIndextag	CREATE INDEX index_4 (name) on Relation;	COLLECT	STATS Relation
RELATION	MyIndextag	CREATE INDEX index_4 (name,TableName) o...	COLLECT	STATS Relation

692

FIG. 40

700

Table Scan Report

QCD Name: tiwizqcd Workload Name: myworkload

Owner	Table Name	Cardinality	AMPs Retrieves...	Geograph...	Statement Text
tiwizqcd	QUERY	45.00	All AMP Retrieve	built locally	sel * from query,relation where query.que
tiwizqcd	QUERY	45.00	All AMP Retrieve	built locally	sel * from query,relation,workload where
tiwizqcd	QUERY	45.00	All AMP Retrieve	built locally	sel * from query,relation,workload;;
tiwizqcd	RELATION	282.00	All AMP Retrieve	built locally	sel * from query,relation where query.que
tiwizqcd	RELATION	282.00	All AMP Retrieve	built locally	sel * from query,relation,workload where
tiwizqcd	RELATION	282.00	All AMP Retrieve	built locally	sel * from query,relation,workload;;
tiwizqcd	WORKLOAD	2.00	Single AMP Retr...	built locally	sel * from query,relation,workload where
tiwizqcd	WORKLOAD	2.00	All AMP Retrieve	built locally	sel * from query,relation,workload;;

FIG. 41

710

Workload Clean Up

Workload Statements

QCD Name: 712

Workload Name:

State	Freq	Statement Text
1	1	sel * from query;;
2	1	sel * from relation;;

Workload Status

714

Selec	Recommend	Index Tag	Validate Sy	Validate Ti	Validate Q
<input checked="" type="checkbox"/>	2	myindextag	deepika	7:43.670000	tiwizqcd
<input checked="" type="checkbox"/>	1	MyIndexT ac	deepika	7:43.670000	tiwizqcd
<input checked="" type="checkbox"/>	2	myindextag	deepika	7:43.670000	tiwizqcd

Delete Options

Delete Workload Delete Analysis

Delete Plans

OK Cancel

FIG. 42

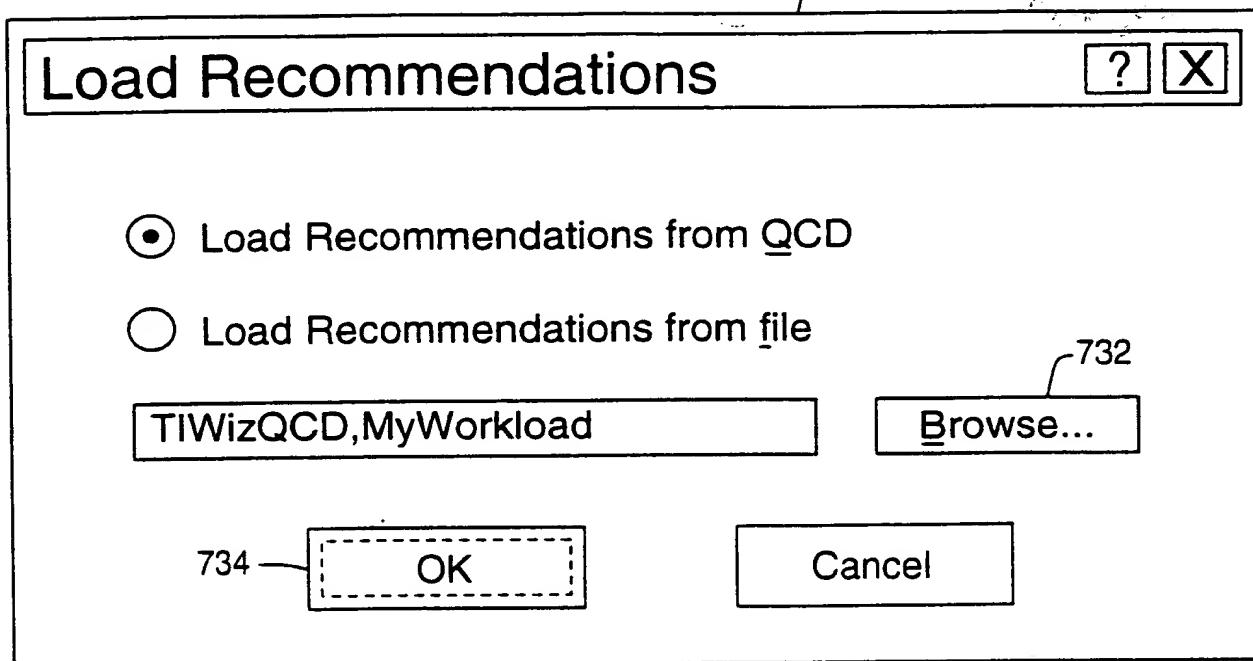


FIG. 43

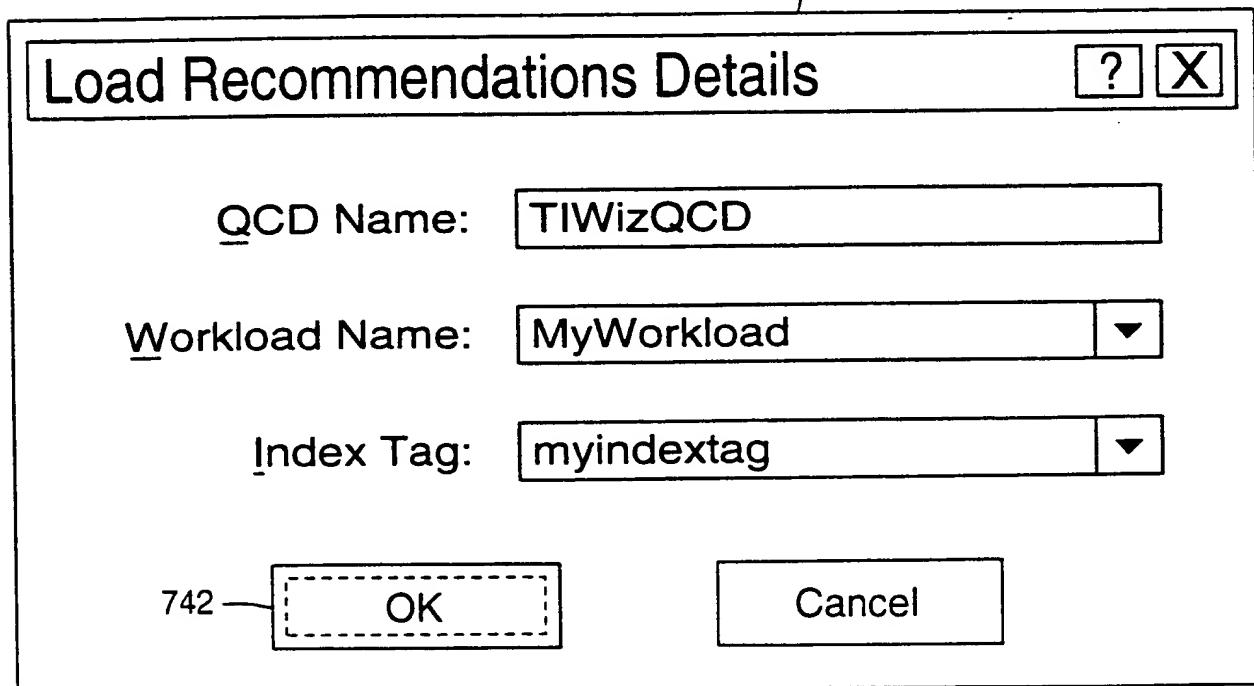


FIG. 44

750

Index Validation

Validate Indexes

Select indexes to be validated: 752 Validate on another system

Sele	Table	Index	Index	Columns	Index DDL
<input checked="" type="checkbox"/>	QUER	MyInd		Query Text	CREATE INDEX index_3 (Query T
<input checked="" type="checkbox"/>	RELA	MyInd		name	CREATE INDEX index_4 (name o
<input checked="" type="checkbox"/>	RELA	MyInd		TableName	CREATE INDEX index_4 (name T

Select All Deselect All View DDL... Validate 756

Validation Results 758

Table Name	Index Name	% Sample on which statistics were collected
QUERY		10
RELATION		10
RELATION		10

Conclusion: An overall improvement of 38.24 in the performance of the system

Compare Options: Compare on same system View Graph 760

OK Compare... Cancel 762

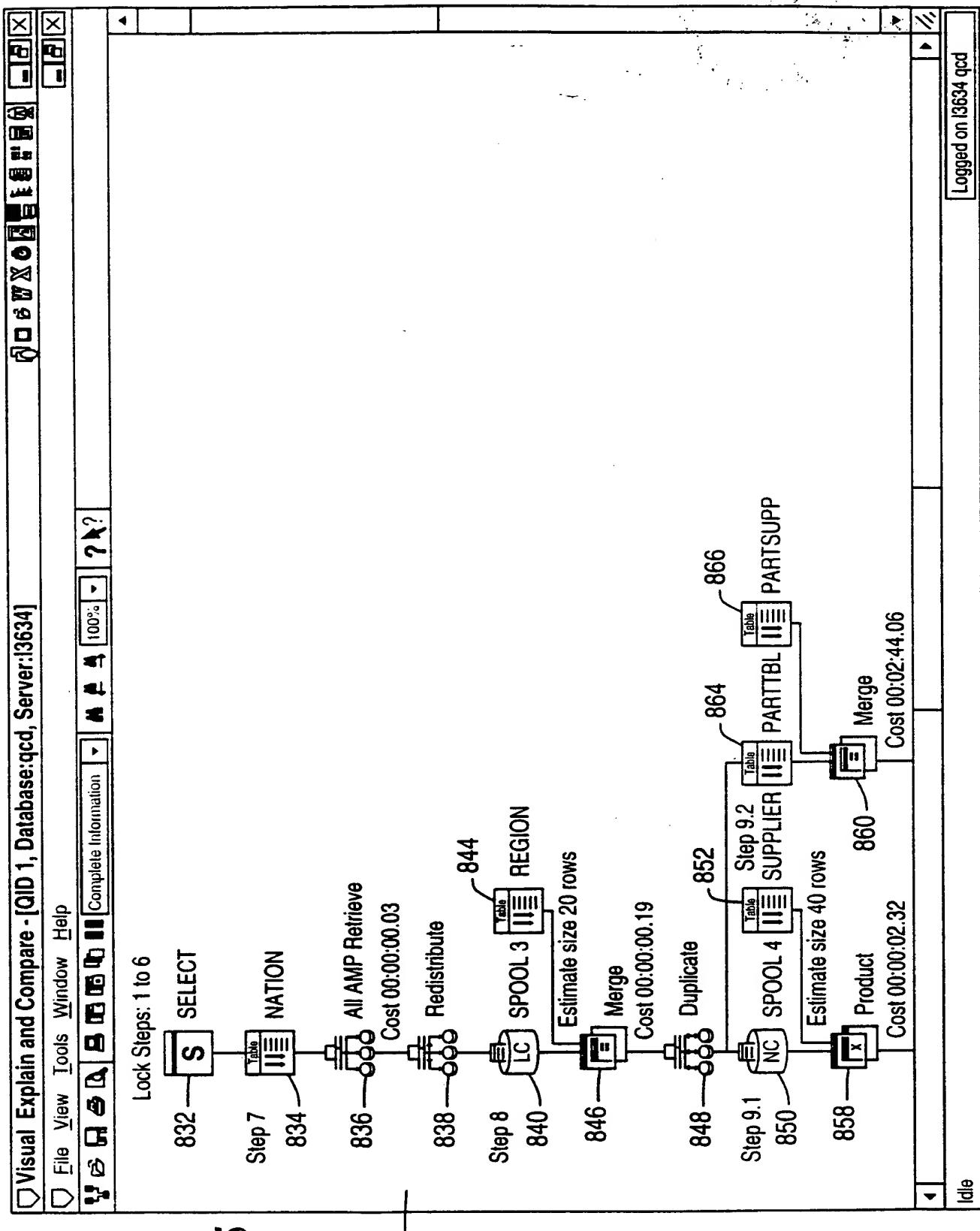


FIG. 45

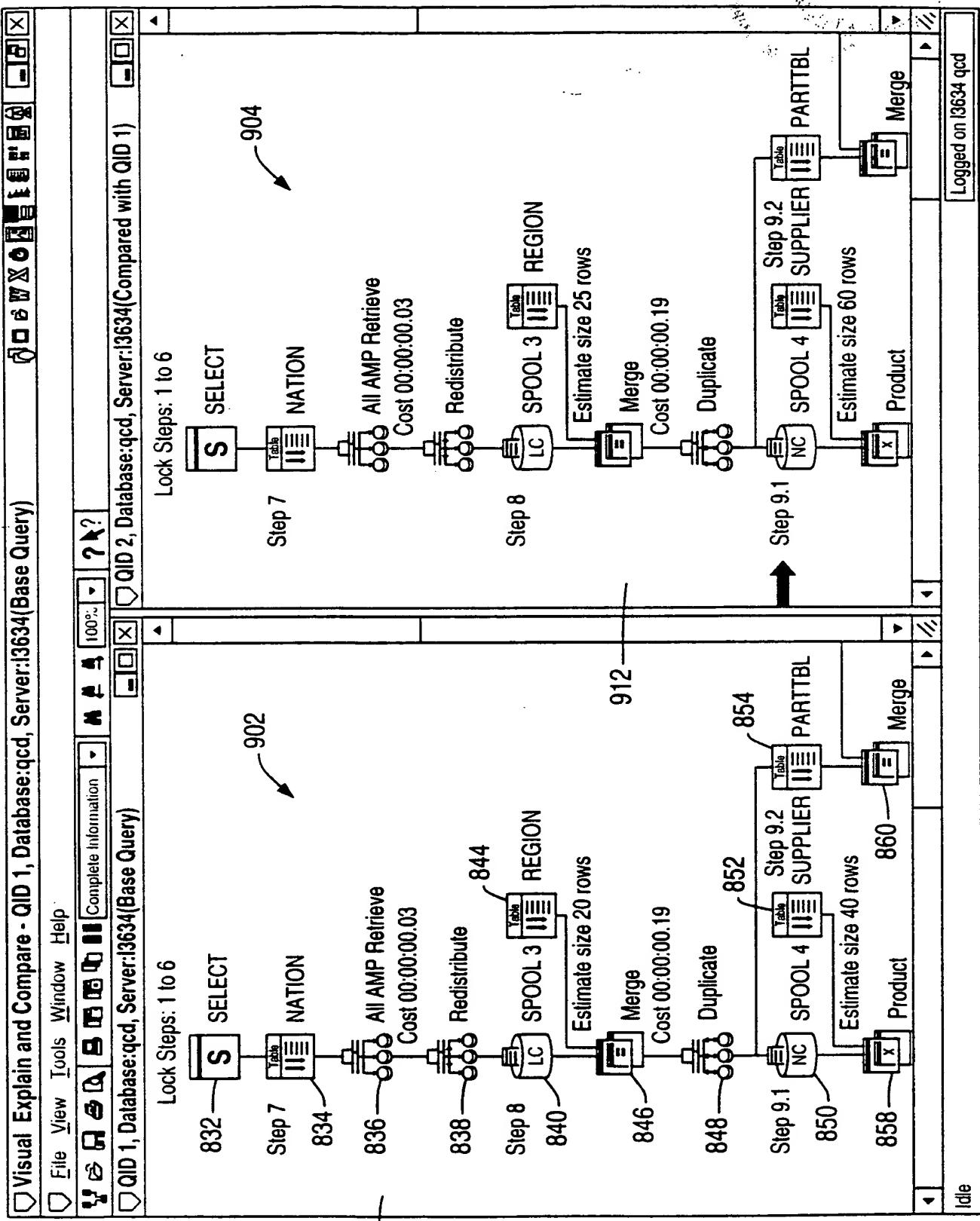


FIG. 46

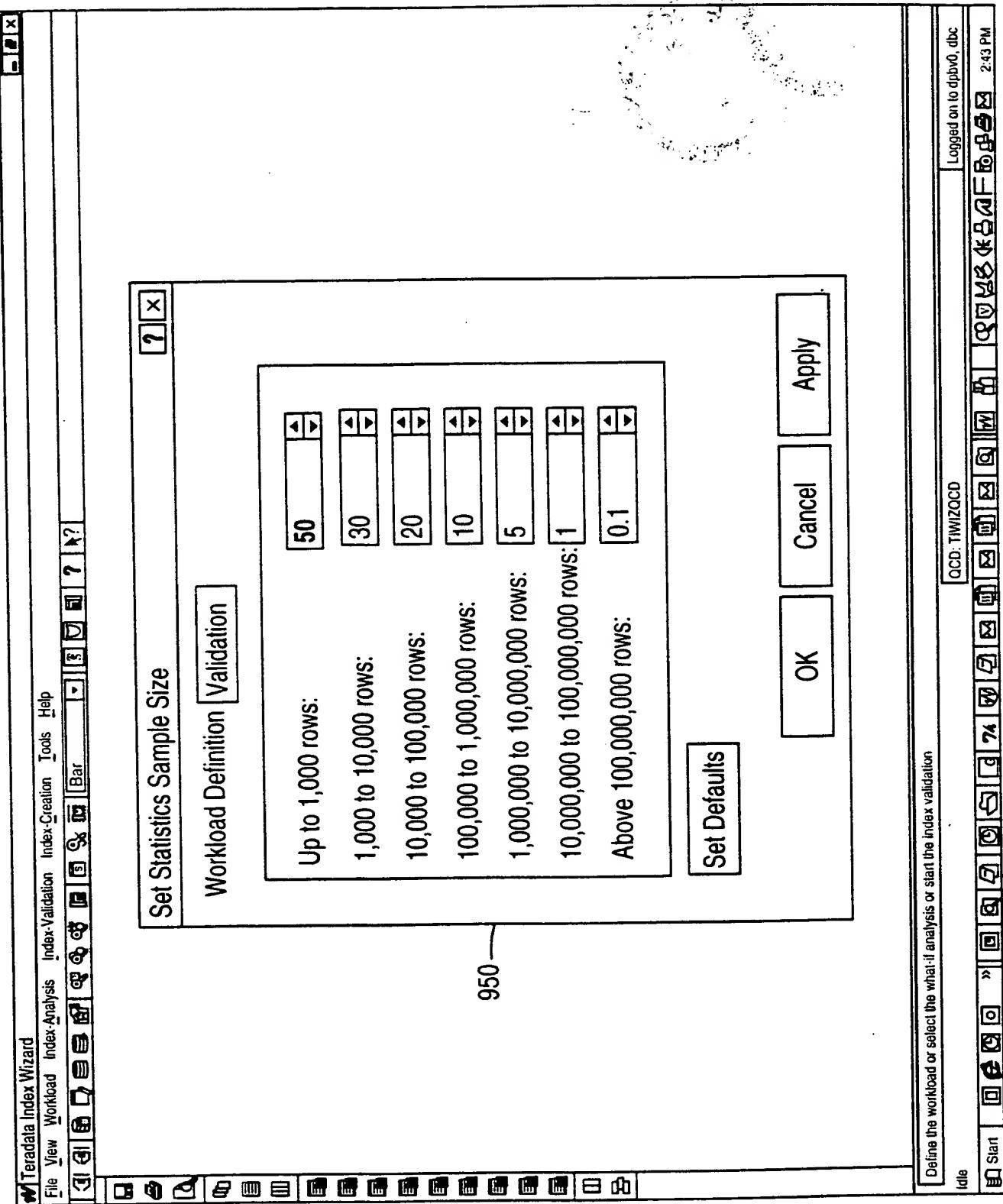


FIG. 47